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A PHYSICIAN VIEWS PSYCHOTHERAPY

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During my tour of psychiatric teaching units and institutions in 1953[1] under the auspices of the World Health Organization, I enquired into psychotherapeutic methods from the points of view of both psychotherapeutic strategy and tactics.

The prevalence of psychiatric ill-health and the need for the maintenance of the psychological well-being of the community cannot be disputed; nor that attention to this aspect of health must be the concern of all those who practise medicine, for it is neither practicable nor indeed desirable that every psychiatric symptom in every patient should be treated by a specialist psychiatrist. Psychotherapy can and must be carried out by practitioners in all branches of clinical practice. If it were essentially and inevitably an elaborate affair its practice would be confined to psychiatrists; fortunately much of psychotherapy falls within the competence of any practitioner.

With this in view, one of the objects of my tour was to see how a basically sound psychotherapeutic outlook to clinical practice could be introduced to the undergraduate medical student. Unfortunately an atmosphere of mystery and even magic still surrounds the word psychotherapy and there are many misconceptions about its nature and scope. One sought, therefore, to define the simple principles common to all forms of psychotherapy as practised today. In this communication, it is not intended to describe and analyse in detail all the methods encountered: there are, for example, at present in New York alone 8 Institutes of Psycho-analysis, each critical of the other's views, which is an indication of the diversity op opinion that exists regarding only one branch of psychotherapy namely, psycho-analysis. Comparable diversity of opinion was found to exist about other forms of psychotherapy as well.

The outstanding feature of one's experience—at many types of psychotherapeutic session at many institutions in many countries—was that similar claims of success were made for various types of psychotherapy applied to the psychoneuroses. In the series that one was able to enquire into were the common psychiatric disturbances occurring in clinical practice, namely, anxiety states, hysteria, the 'psychosomatic' illnesses (of which ulcerative colitis and asthma were receiving much attention), obsessional states, the lesser depressions and some psychopathic states. Anxiety symptoms referable to the gastro-intestinal, cardio-vascular and musculo-skeletal systems were the commonest masqueraders as organic disease. All therapists, using many variations of therapeutic technique, claimed that about two-thirds of their patients suffering from the above disturbances showed improvement after treatment. The results were usually classified into the necessarily ill-defined categories of 'much improved', 'improved', and 'unimproved'.

There are many difficulties in the way of assessing results accurately: There was an outstanding lack of definition of the different forms of psychotherapy; the laconic expression on a case-record 'simple reassurance and medicine' is a quite incomplete account of therapy; nor is the term 'group therapy' indicative of a standardized form of therapy. The difficulties of obtaining proper control series in therapeutic trials are considerable—more so than with organic conditions. A series of untreated psychoneurotic cases is not readily found, for few cases that attend for formal psychotherapy have had no form of psychotherapy previously. The therapy may have been carried out, consciously or not, by physicians or social agencies, or through religious exercises or more or less reliable literature. Some of the series studied were 'unselected' groups of patients from medical out-patient departments; other series were selected because of their suitability for psychotherapy in one form or another, or for treatment by particular types of therapist, for example, psycho-analysts, eclectic psychiatrists, trainee psychiatrists or even senior medical students.

The therapy itself can be considered according to

its duration or depth and whether it is administered individually or in groups. It may be of brief duration, lasting from a single interview to weekly or more frequent interviews spread over 3–6 months, or it may be long, as in psycho-analysis, which may last up to 5 years with an interview-frequency of 3 a week. It may be superficial ('simple', and consequently symptomatic), with or without an orthodox psychodynamic basis, or it may be profound, as in psycho-analysis, in which the deepest motivations and causes of abnormal behaviour are probed and utilized therapeutically. Group therapy as opposed to individual therapy will be discussed later.

Therapists interviewed included psychiatrists, other specialists (particularly physicians), general practitioners, and senior medical students applying therapy under supervision. In the United States the majority of psychiatrists were psycho-analysts, but in other countries, the majority were eclectic; that is, they selected what they considered best from various psychotherapeutic philosophies.

Of ancillaries to psychotherapy, occupational therapy stands out as the most important, providing, as it does, relaxation and a task with an achievable end. It appears to be equally effective whether simple or elaborate and many units aim at providing facilities simple enough to be carried through to the home environment.

The physical character of the environment (that is, the 'bricks and the mortar') in which in-patient psychotherapy is given, varies very much in different units. Again, therapeutic results from units with simple physical environment do not appear to differ from those from units with elaborate environment. In the United States the most elaborate environment is provided in some units, costing the patient up to 28 dollars a day for accommodation only, whilst other units, by intent, retain the simplest of surroundings. In other countries, simplicity was the key-note in most units. In general, the principle was to provide an in-patient environment not too far removed in elaborateness from the home environment to which the patient must return, and in which the improvement initiated as an in-patient must be maintained.

Recreational facilities provided by in-patient units were also varied in character, from the simplest to the most elaborate, and the results seemed to bear no relation to the degree of elaborateness.

Drugs, particularly sedatives, must always be regarded as ancillary to psychotherapy and should be used as sparingly as possible. They must never be a substitute for the all-essential human personal attention given to the patient.

It was generally felt that wherever possible—and this applied to the vast majority of cases needing formal psychotherapy—therapy should be given on an out-patient or consulting-room basis.

GROUP THERAPY

Much debate centres around the value, methods and application of group therapy. The principle is to allow the 8 or 12 members of the group, who may be suffering from various forms of psychoneurosis or from similar psychosomatic illnesses, e.g. asthma, or dissimilar ones, to meet together under the guidance of a leader, to talk freely of their symptoms, ambitions, politics, home life and friendships. The group leader, who is in most instances a psychiatrist, analytic or eclectic, but sometimes a physician, sits as a quiet listener, occasionally interpolating remarks which assist and guide the discussion; he refrains from 'lecturing'. Questions put to him by a member of the group he diverts back to the group. He is careful to use in the group discussions only knowledge of the patients which he has acquired in the group sessions. Quiet as the leader is, much depends on him, and a change of leader always disturbs the group. Some group leaders refuse to have stranger observers in the group, but permit them to watch the proceedings through a one-way screen; others have no objection to observers being present who have been duly introduced to the group. The frequency of the group meetings may be once or twice a week. The composition of the group may remain constant for many months, or may change from month to month. Psychiatrist leaders and physician leaders claimed similar therapeutic results for their groups.

Group therapy is not practised to any extent in Scandinavia, and in Norway in particular the psychiatric view is that the Norwegian is a reserved type of person who will not talk freely of himself in front of others. In Holland, where the family unit is strong in the community, group therapy has not met with universal favour. In Great Britain, group therapy is not accepted by all, and where accepted takes various forms. A fairly orthodox type of group-therapy session was visited in Glasgow, where the aggressive qualities of Glaswegian children were reflected in the aggressive behaviour of members of the group to the psychotherapist leader. This the therapist accepted placidly, turning it to good group-therapeutic use. It was remarked that the Glaswegian, like the Norwegian, was a reserved type who did not talk freely in groups, but was stimulated by what occurred in the group to request private interviews with the psychiatrist afterwards.

A variant of group therapy was seen in Dr. Maxwell Jones's rehabilitation unit at the Belmont Neurosis Clinic, Sussex. The unit is notable for the poor material which it accepts for rehabilitation—patients who have previously gained no benefit or have relapsed after various types of institutional and individual psychotherapy. Self-help, the helping of others, and the 'psychodrama' (in which patients rehearse and then 'act out' life situations selected from their own experience in front of the other patients, under the guidance of Dr. Jones) are features of this unit's activities. The unit claims a 50% maintained rehabilitation rate in a 4-year follow-up. Yet another variant of group therapy visited in Great Britain was at the Tavistock Psychiatric Clinic, London, where general practitioners are taught psychotherapy by what are virtually group-therapy methods under the leadership of an analytically-trained psychiatrist. The general practitioners meet once a week as a group, bringing notes of psychoneurotic patients which in rotation they present to the group. The leader guides the discussion that follows, allowing

the group to see for themselves where the practitioner presenting the case has acted correctly and where he has erred in the management of his case. Views are mixed regarding the efficacy of this method of teaching psychotherapy; but those practitioners who do not lapse in their attendance claim benefit for their patients.

In the United States, too, views were mixed on the value of group therapy. It is, however, accepted as a therapeutic measure by most analysts, who realistically appreciate that psycho-analysis is not a practicable hospital out-patient procedure, and that group therapy with an analytic background is a useful and effective substitute in the majority of cases. In only one centre visited, the Phipps Psychiatric Clinic at Johns Hopkins Hospital, was an objective, controlled evaluation of group therapy being attempted, based upon evidence obtained from comprehensive questionnaires issued to patients who were undergoing group therapy. It is regarded by some authorities as no more than a time-saving device by which it was possible to treat 10 patients at a time instead of one. Other authorities hold that group therapy had a specific value, suiting some patients better than individual therapy.

INDIVIDUAL THERAPY

Psycho-analysis is the common form of psychiatric private practice in the United States (where the fee for each session of an hour is as much as 50 dollars). It is practised only to a limited extent in Great Britain and Holland, and virtually not at all in Scandinavia. In the United States it is applied to a very limited extent in hospital practice. There are numbers of schools of analysis, some based on Freud and some on Jung, and some on the views of a particular 'Institute'. Features common to all are the duration of the therapy over years, and the basic working principles of free association and the interpretation of dreams. In the best psychiatric teaching units, psycho-analysis is regarded firstly as a form of therapy to apply individually to a few specially-selected cases, secondly as an essential part of the training of analysts, all of whom spend 2-3 years in analysis themselves, and as a method of lending understanding to the psychodynamic mechanisms of symptoms and to the techniques of briefer forms of psychotherapy. It is generally accepted that psycho-analysis is not a practicable therapeutic procedure in hospital practice; it is of course, acceptable as a research procedure.

The importance of the psychodynamic approach to diagnosis and treatment in psychiatry, irrespective of the depth or simplicity of the psychotherapy used, is universally accepted, particularly in regard to the influence of childhood experience on later behaviour-reactions to life situations. The variety of interpretations by different analysts of the facts obtained by interview from a single patient was, however, disturbing, and one felt that there was still much that was hypothetical in psycho-analysis. Elaborate and specialized forms of psychotherapy other than psycho-analysis may have their place in a limited number of selected cases, but simpler forms of therapy have a very general application in practice.

As mentioned earlier, an outstanding feature of the investigation was the similarity of therapeutic response in the psychoneuroses treated, irrespective of the therapeutic technique used, the generally-stated figure for improvement being two-thirds. Parallel results were claimed by analytic and eclectic psychiatrists, physicians, and the different schools of analysis. Perhaps the most interesting feature of all was that in at least 3 well-known medical schools medical students applying psychotherapy under supervision achieved results equal to those of psychiatrists. However, at these schools a staff—student ratio of 2 to 1 permitted intimate supervision, and in most instances the patients for therapy were selected as suitable for student therapy. At one of these schools a different student undertook the successive weekly psycho-therapeutic sessions for each patient over a period of 10 weeks; no harm resulted from this multiplicity of therapists and the patient benefited. General practitioners trained in psychotherapy at the Tavistock Clinic claim benefits to their patients.

DISCUSSION

What can one infer from these observations? In the treatment of the psychoneuroses, what is the significance of the universal figure of two-thirds improvement under psychotherapy? How much more successful is psychotherapy than the natural course of the illness? Is psychotherapy more successful than unorthodox forms of practice? Is one form of formal psychotherapy superior to another? How much basic knowledge is required to enable a psychotherapist to achieve success, or at least to avoid doing harm?

Clear answers to these questions cannot be given. All one can do is to hazard suggestions regarding the basic principles underlying the practice of psychotherapy.

An important feature in all forms of psychotherapy is the doctor-patient relationship. The doctor who gives time to his patient and who is able to concentrate and listen well, with occasional appreciative and guiding comments, questions and gestures, inspires confidence; he must be sensitive to emotional problems in his practice, must not blame his patients for neurotic behaviour, and must not blame himself for not being able to ascribe the patient's symptoms to an organic cause; and he must avoid signs of annoyance and irritation whilst listening to the neurotic patient's story.

Psychotherapy must not be regarded as an esoteric procedure, shrouded in mystery and necessarily carried out in a darkened room; it is basically a very ordinary procedure, and consists of interviewing the patient. The interview needs time, time and more time. The interview has in itself considerable psychotherapeutic bearing. Apart from supplying diagnostic information, a properly-conducted interview breeds confidence, permits the doctor to understand the patient and the patient to understand himself and his symptoms, and induces relaxation by the cathartic effect of talking. Instruction of medical students in psychiatric interview-technique is, in my opinion, the most fundamental part of his training in clinical psychiatry and most calculated to breed a type of practitioner who will be better

able to provide for the psychiatric needs of his future practice. But, no matter how adequately instructed when a medical student, the medical practitioner cannot fail to benefit from further instruction and advice in psychotherapy after he has been in practice for a few years. The increased knowledge and experience gained in practice sensitizes him to a greater appreciation of the psychological aspects of illness than he was capable of as a medical student.

Successful psychotherapy requires humility on the part of the doctor. What Dr. John Whitehorn, Director of the Phipps Clinic, calls the 'Jehovah complex' must be avoided—the all-too-common omnipotent, omniscient approach, which leads the practitioner, after a few minutes' interview to slap the patient on the back with the hearty advice, 'I quite understand all your troubles; you will be perfectly fit, and I can assure you you have nothing to fear'. This complex says of the patient with anorexia nervosa 'I'll talk her into eating', whereas the humble and more able psychotherapist—whether he be psychiatrist, general practitioner, or specialist, physician or surgeon—says 'No, better let her talk herself out of the reasons why she does not eat'.

Although similar results are claimed for different approaches by different workers, any therapist with some knowledge of the psychodynamic background of psychotherapy (whose therapy is consequently based upon an understanding of the mechanisms of symptom genesis) is probably less likely to do harm than the untrained therapist with either his bull-at-a-gate or evasive technique. The therapist with an understanding of psychodynamics is at least in a better position to understand why his patient does or does not get better than the untrained practitioner practising psychotherapy as an art without understanding. On the other hand, the instructed psychotherapist who lacks human understanding is also liable to harm his patient.

In regard to the depths to which the therapist should probe, one of the most noted American psycho-analysts ventured the opinion that in the majority of cases psychotherapy should aim primarily at allaying anxiety, and should provide reassurance and support, assist in the changing of unsatisfactory environmental situations, educate and explain, and provide relaxation by physical means such as occupational therapy. In applying this symptomatic treatment, cognizance must naturally be taken of the personality of the patient and of his particular way of reacting to the environmental situations that have apparently precipitated his illness. He warned that the more radical uncovering techniques in which motivations and psychodynamic mechanisms of symptoms are probed over many interviews, need great experience, particularly in knowing how deep to go without doing harm. He summarized the position by stating that it was better to err by omission than by commission; this was not an isolated view amongst leading psycho-analysts.

CONCLUSION

It would appear that the common basis in all forms of psychotherapy is a satisfactory doctor-patient relationship, which is established by giving the patient time to talk, no matter how sorely tried the doctor may feel.

In the vast majority of cases that require psychotherapeutic attention, elaborate forms of psychotherapy and elaborate ancillaries to psychotherapy are unnecessary.

It would appear to be not unreasonable to deduce from the strange similarity of the results in psychoneuroses of all types of treatment by all types of psychotherapists (that the improvement rate is two-thirds) that 'simple' psychotherapy based upon a good doctor-patient relationship, assisted by the simplest of physical ancillaries given in the simplest of surroundings, has as good a chance of improving the patient as the more elaborate approach.

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LABELLING OF MEDICINES DISPENSED BY MEDICAL PRACTITIONERS

The Secretary for Health, Dr. J. J. du Pré le Roux, has written to the Secretary of Federal Council and his letter is published for general information. It reads as follows:

'It will be recalled that arising out of an enquiry by a member during the recent meeting of the Federal Council I undertook to advise you whether it is obligatory for medical practitioners who dispense their own medicines to label the containers of such medicines with their names and addresses.

'The legal position in the above connection is as follows:

'(*a*) paragraph (i) of sub-section (1) of Section 42 of the Food, Drugs and Disinfectants Act No. 13 of 1929 empowers the Minister to make regulations "prescribing the mode of labelling of articles of food or drugs or packages containing the same . . . and the matter contained or not to be contained in such labels";

'(*b*) No. 2 of the regulations made by the Minister in terms of section 42 of Act 13 of 1929 provides, *inter alia* that every package containing any food or drug shall be labelled with the name and business address of the manufacturer or importer or person by whom or on whose behalf such article was enclosed in such package; and

'(*c*) in terms of section 44 of Act 13 of 1929 "drug" means any substance or mixture of substances used as a medicine for man or animals, whether internally or externally, and includes anaesthetics.

'In the circumstances it is clear that a medical practitioner who dispenses his own medicines must label the containers with his name and address.

'I may mention that the Registrar of the South African Medical and Dental Council has indicated that while he agrees with the above view, medical practitioners who do their own dispensing should be careful to see that they do not place anything on bottles of medicine beyond what is required of them and that the particulars which they put on the bottles do not contravene the Council's ethical rules relating to advertising'.

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EDITORIAL

ALDOSTERONE

The rapid advances made in the isolation and crystallization of aldosterone and in the study of its structure have resulted from close international co-operation. By paper chromatography of adrenal extracts the compound was first identified and found to be more potent than deoxycortone (desoxycorticosterone). The smallness of the quantities so far obtained has delayed complete studies of the physiological properties of the substance, but it is well established by many biological tests that it is more potent and in some ways different from deoxycortone.

The new steroid is 25 times as potent in producing sodium retention, but only 5 times in promoting execretion of potassium; a difference therefore exists in the relative activity on sodium and potassium excretion in the urine. Abnormal retention of salt and water appears to be less likely with the new steroid. It does not appear to have a direct antidiuretic action. In certain studies on water excretion aldosterone was without effect whereas deoxycortone decreased the water excretion. It would appear that the role of aldosterone in the formation of oedema may be less important than might have been anticipated from its mineralocorticoid activity. Aldosterone also differs from deoxycortone in converting the hypoglycaemia in Addison's disease to normal; it seems therefore to combine the effects of deoxycortone with some of the properties of cortisone.

Aldosterone appears to have a greater action on electrolyte metabolism than other adrenocortical hormones but the significance of this and its other actions has still to be elucidated; e.g. factors controlling release of the hormone, including the effect of electrolyte intake in the diet.

There is no evidence that deoxycorticosterone is secreted by the adrenal gland, but aldosterone has been found in adrenal venous blood and adrenal cortex.[1] The output of a sodium-retaining corticoid in the urine of normal children and adults and of patients with hypoadrenalism or hypopituitarism has been measured;[2] the chromatographic behaviour and other properties of the substance resemble that of aldosterone.

The finding of the highly active sodium-retaining

VAN DIE REDAKSIE

ALDOSTEROON

Die vinnige vordering wat met die isolering en kristallisering van aldosteroon en met die studie van die struktuur gemaak is, is aan noue internasionale samewerking te danke. Die verbinding is vir die eerste keer deur papierchromatografie geïdentifiseer en dit is bevind dat aldosteroon sterker as deoksikortoon (desoksikortikosteroon) is. Die hoeveelhede van die stof wat tot dusver verkry is, is so klein, dat die fisiologiese eienskappe nog nie volledig bestudeer kon word nie, maar biologiese proewe het dit terdeë bevestig dat aldosteroon sterker as deoksikortoon is en in sommige opsigte daarvan verskil.

Die nuwe steroïede verbinding is 25 keer so effektief met die terughouding van natrium maar slegs 5 keer so doeltreffend met die uitskeiding van kalium; daar is derhalwe 'n verskil in die relatiewe uitwerking op natrium- en kalium-uitskeiding in die urine. Die moontlikheid dat 'n abnormale sout- en waterterughouding deur die nuwe steroiëde veroorsaak sal word, is minder groot. Dit besit skynbaar geen regstreekse antidiurese-werking nie. In sekere water-uitskeidingsproewe het aldosteroon geen uitwerking getoon nie terwyl deoksikortoon 'n afname in wateruitskeiding bewerkstellig het.

Vermoedelik speel aldosteroon 'n minder belangrike rol in die veroorsaking van edeem as wat van sy mineraalagtige skorsaktiwiteit verwag sou word. Aldosteroon verskil ook van deoksikortoon daarin dat dit in Addison se siekte die bloedsuiker tot normaal kan herstel; blykbaar kombineer dit die aksie van deoksikortoon en sommige van die eienskappe van kortisoon.

Oënskynlik besit aldosteroon 'n groter uitwerking op elektrolietmetabolisme as die ander bynierskorshormone maar die betekenis hiervan en ook van ander gevolge van aldosteroon bv. die faktore wat die vrystelling van die hormoon kontroleer as ook die gevolge van elektrolietinname in die dieet, moet nog verduidelik word.

Daar is geen bewys dat deoksikortikosteroon deur die bynierklier afgeskei word nie, maar aldosteroon is in bynieraarbloed en in die bynierskors gevind.[1] 'n Natriumhoudende bynierskorsstof is in die urine van normale kinders en volwassenes gevind en ook in die urine van pasiënte wat aan bynierkliergebrek of harsingslymkliergebrek ly[2]; die chromatografiese en ander eienskappe van hierdie stof gelyk op die van aldosteroon.

Die ontdekking van hierdie besonder aktiewe natriumhoudende hormoon is van belang daar dit die klem

hormone is important in shifting the emphasis from the traditional one presumed to regulate the handling of sodium by the kidneys, but special techniques will have to be used to detect variations in output of aldosterone in response to altered physiological states because of its very high potency and the low chemical concentration. Chemical analyses of urine for 17-ketosteroids and 17-hydroxycorticoids and other fractions are not of value in assessing the output of the sodium-retaining factor.

Aldosterone has the same chemical structure as corticosterone except for an aldehyde group replacing a methyl group on the 18th carbon atom; the presence of this aldehyde group, which is unique, suggested the name for the hormone. It is effective in Addison's disease when given by mouth, e.g. 100 micrograms daily; sodium balance and blood pressure become normal and pigmentation is decreased. In man aldosterone is 20–30 times more active than deoxycortone.

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2. Leutscher, J. A. and Axelrad, B. J. (1954): J. Clin. Endocr., **14**, 1086.

aflig van die tradisionele hormoon wat veronderstel was om die hantering van natrium deur die niere te reguleer. Vanweë aldosteroon se besonder hoë sterkte en lae chemiese konsentrasie sal spesiale tegnieke gebruik moet word om die variasies in aldosteroonproduksie aan te teken wat op veranderings in fisiologiese toestande volg. Chemiese ontledings van urine vir 17-ketosteroïede-, 17-hidroksibynierskors- en ander fraksies is van geen waarde met die bepaling van die natriumhoudende faktor nie.

Aldosteroon het dieselfde chemiese bou as kortikosteroon behalwe vir 'n aldehiedgroep wat 'n metielgroep op die 18de koolstofatoom vervang; dit is hierdie unieke aanwesigheid van 'n aldehiedgroep wat die naam aldosteroon aan die hormoon verleen het. As dit mondeling toegedien word bv. 100 mikrogramme daagliks is dit doeltreffend in Addison se siekte; die natriumbalans en die bloeddruk word tot normaal herstel en die pigmentasie neem af.

VERWYSINGS

1. Selkurt, E. E. (1954): Physiol. Rev., **34**, 287.
2. Leutscher, J. A. en Axelrad, B. J. (1954) J. Clin. Endo. **14**, 1086.

CONTRACT PRACTICE

Throughout the world a change is taking place in the pattern of medical practice. Half-a-century or more ago it mainly consisted of private practice by entirely independent practitioners who charged such fees as their patients could pay, or of free services given as charity—mostly the charity of the doctors themselves. But even in those days there were medical officers, whole-time or part-time, who were paid salaries by the government or local authorities to give medical attention to the indigent, whether in hospital or as 'surgery' or domiciliary cases; and people, chiefly of the 'working class', had formed themselves into benefit societies through which by a weekly contribution they secured for themselves and their families sick-pay and free general-practitioner services. Medical attention was therefore already given to a minor extent by salaried medical officers and 'club doctors', and closed contract practice was therefore in existence.

With social changes salaried and contract practice has steadily grown, partly at the expense of private practice, and partly because it has made provision for social classes who used to get their doctoring through charity —or went without it.

In Britain, where in cooperation with the medical profession the State has made itself responsible for the medical treatment of the whole community, and private practice survives only in fragmentary form, the national service was in fact built upon the foundation of the benefit societies, which by 1911 had attained considerable size. The benefit societies had provided medical treatment on the basis of the closed panel, but the National Health Service is so designed that the patient has free choice of doctor and every doctor has the right to join the service and to accept on his panel (or refuse) any person who wishes to join.

The effect of the British system is that the general practitioner works very much on the lines of private family practice, but is paid by the State, not according to items of work done, but on the panel system.

In other countries, especially those which, like our own, had a colonial origin, the tendency is in a different direction, and what we know as the Medical Aid Society furnishes a pattern for the development of the public medical service. This system preserves private practice all but intact, and it has been favoured and fostered in South Africa by our Association. But, as in other countries, the benefit society system also operates. There are innumerable societies varying in size from small clubs to the large and old-established Railways and Harbours Sick Fund, all operating on the closed-panel system, which is the characteristic feature of benefit societies. A more recent intrusion into the system is the full-time benefit-society doctor. The Association is reacting strongly against such full-time appointments and there is a strong body of opinion against the closed panel—and therefore against the benefit-society system and in favour of that of the medical aid society.

Both of these systems are growing rapidly, and the Association is right in actively interesting itself in the developments that are taking place; for it is these developments that are likely to shape the future pattern of medical practice, whether it takes the form of a State service or not. A significant feature is the part that industry and commerce are taking in the provision of medical services for their employees; in the face of this it behoves the profession jealously to guard its independence.

While the greater issues are engaging the attention of the Association it also behoves the individual practitioner to adhere strictly to the rules of the Medical Council concerning professional appointments, which are set out on page 998 of this issue of the Journal.

ELECTROCARDIOGRAPHY IN GENERAL PRACTICE*

A. H. VOSLOO, M.B., CH.B.

Somerset East

Heart disease is the commonest cause of disability and death. We as general practitioners are daily consulted by patients afflicted with heart disease, as well as by those who wish to be reassured that their hearts are sound. In order to make a correct diagnosis, we require not only a good history and a full physical examination, but also an electrocardiographic examination. The results of these examinations must be correlated with one another to arrive at the correct conclusion.

It is unfortunate that the electrocardiogram and the necessary knowledge to interpret it are not available to every general practitioner, for he is usually the first to be consulted by the patient. In its absence, it is quite possible to miss cases of serious heart disease and to diagnose heart disease where it does not exist. On the other hand, if the electrocardiogram is not correctly interpreted and correlated with the rest of the examination, one may dismiss as trivial a serious case, or wrongly diagnose a case as serious heart disease and thus cause the patient to suffer unnecessarily from a bogus 'coronary disease' of electrocardiographic origin.

During recent years an increasing number of general practitioners have first-class electrocardiographs at their disposal so that a patient with suspected acute heart disease can be examined early and his subsequent progress more carefully studied. Similarly the chronic heart case can be better assessed and more rationally treated.

Amongst the conditions frequently clarified by an electrocardiographic examination are:

1. Coronary-Artery Disease.
   (*a*) Myocardial infarction.
   (*b*) Transient myocardial ischaemia (angina pectoris).
   (*c*) Acute coronary insufficiency.
   (*d*) Myocardial degeneration.
2. Ventricular hypertrophy.
3. Myocarditis.
4. Pericarditis.
5. Pulmonary embolus.
6. Medication.
7. Other conditions such as cardiac arrhythmias, bundle-branch block, myxoedema, auricular hypertrophy, hypocalcaemia, hyperkalaemia, anomalous atrio-ventricular excitation (Wolff-Parkinson-White syndrome) and pulmonary heart diseases, etc.

(1) CORONARY-ARTERY DISEASE

(*a*) *Myocardial Infarction*

From the general practitioner's point of view, the most important use of the electrocardiogram is in the diagnosis of coronary-artery disease. The electrocardiogram is the most accurate means of diagnosing myocardial infarction. It is useful in determining the extent of the infarct and in detecting extensions of an existing infarct. It must however be stressed that in some cases of myocardial infarction an electrocardiogram may yet be within normal limits; for instance (1) if the infarction is small, (2) if the infarction is situated posteriorly, (3) if the electrocardiogram is taken after cessation of signs of injury but before the commencement of signs of necrosis, (4) if the infarction is a high antero-lateral one and only the routine chest leads are recorded. Should one, however, have a negative electrocardiogram and the clinical condition point to infarction one must repeat the electrocardiographic examination daily and also take leadings higher up than the customary chest leads.

The sequence of electrocardiographic changes produced by myocardial infarction is of the utmost importance. The event can be arbitrarily divided into 4 stages, viz. those of (i) Ischaemia, (ii) Injury, (iii) Necrosis, (iv) Healing.

(i) *The stage of ischaemia* is an immediate result of the interference with the blood supply by coronary-artery thrombosis or by obliteration of the lumen by atherosclerosis. The blood supply of the outer layers of the myocardium is richer than that of the deeper or subendocardial regions, because the vessels enter from the outer (or epicardial) surface and also because of the greater pressure in the cardiac cavities during mechanical systole. Interference with the blood supply will thus be of greater significance in the subendocardial layers of the myocardium. The area of ischaemia, as well as the subsequent area of myocardial infarction, will as a result have the general shape of a truncated cone with its base directed towards the endocardium. With the exploring electrode situated over the area of involvement and while there is no more than subendocardial ischaemia one finds a T-wave with increased voltage and which is sharply pointed. The rest of the ventricular complex is unchanged. As the ischaemia spreads owing to deficient collateral circulation one gets the stage of transmural ischaemia. The T-wave, owing to reversal in the net direction of repolarization, now becomes negative directly over the ischaemic area, and diphasic over the adjacent area. As these T-wave changes occur independently of any abnormality of the QRS complex they are known as primary T-wave changes. They are not diagnostic of myocardial infarction, for actual infarction has not yet occurred. They may similarly be produced by transient myocardial ischaemia (angina pectoris). This stage of ischaemia, preceding an actual infarction, is seldom seen in practice.

(ii) *Stage of Injury.* When the reduction of blood flow becomes more prolonged and more intense, signs of injury appear. These are characteristically manifested by displacement of the RS-T junctions and segments away from the isoelectric level. Injury occurs in the same order as does ischaemia, and for the same reasons. The centre of the subendocardial zone is first involved, and thereafter the transmural zone.

* A paper presented at the South African Medical Congress, Port Elizabeth, June 1954.

This stage of injury does not last long, for the infected muscle must either recover or die. The interval between commencement and cessations of changes in the RS-T segments and junctions usually lasts from a few hours to a few days. Reappearance of RS-T displacement once it has disappeared means extension of the infarct. Displacement of the RS-T segment persisting for months is usually associated with a ventricular aneurysm. In general, the longer the duration of the stage of injury the worse the prognosis will be. Should the stage of injury be of short duration, the inference is that the collateral circulation improved rapidly, resulting in the recovery of most of the injured muscle-fibres.

(iii) *Stage of Necrosis.* If the collateral circulation does not improve, the death of many muscle fibres is likely. This is known as the stage of necrosis, and occurs within a few hours or a few days after the commencement of the myocardial infarct. The necrotic area develops and spreads in the same order as the ischaemic and injured zones. It may sometimes though rarely stop in the subendocardial area, resulting in a subendocardial infarct. Usually, however, it spreads to the epicardium and one thus has a transmural infarction of conical shape. the necrotic fibres are not capable of producing electric force, but are able to act as electric conductors. When the exploring electrode is over the area of necrosis, the R-wave disappears and is replaced by a QS deflection. There is also a deeply and characteristically coved and inverted T-wave. This T-wave is described as the 'coronary T'. Adjacent to the zone of necrosis, one has a zone of injury and still further away a zone of ischaemia. Should the exploring electrode be placed over the various zones, one is likely to have different forms of electrocardiograms corresponding to normal, ischaemic, injured and necrotic patterns.

(iv) *The stage of healing* commences after the cessation of the spread of necrosis. The injured fibres recover soon and thus the RS-T segment returns to the isoelectric level within a few days. The necrosed fibres are replaced by fibrous tissue, which causes the necrotic zone to shrink gradually. The Q or QS deflections may thus disappear from some leads. Usually, however, they are the most persistent of all changes, and may remain permanently. The ischaemic area remains for a longer period than the injured area and is characterized by a deeply inverted T-wave with symmetrical limbs and convex coving. Most T-wave inversions, however, return to normal after 3-6 months, depending on the collateral circulation.

We usually speak of a (i) fresh infarction; (ii) a recent infarction, or (iii) an old infarction. The *fresh infarct* is characterized by RS-T segment displacements and is always associated with an R-wave. Abnormal Q or QS deflections may appear during this stage.

Recent infarction is characterized by abnormal Q-waves or QS deflections plus the coronary T-wave alterations. The appearance of broad or very deep Q-waves, or of QS deflections, in those leads in which they are not normally present, indicates that necrosis has occurred. The RS-T segments have begun to return or have returned to the base-line level at this stage.

Old infarction may be diagnosed where there are abnormal Q or QS alterations plus a history suggesting myocardial infarction. The T-wave changes are by this time not characteristic of infarction, or have returned to normality. One also classifies myocardial infarction according to the area of the heart involved. Thus one may speak of an anterior, antero-septal, antero-lateral, high antero-lateral, posterior, postero-lateral, apical and subendocardial infarctions. Each type has its more or less characteristic electrocardiographic pattern. The form of the electrocardiogram will thus depend on the position of the infarct, on the stage of development of the infarct, on the age of the infarct, and on the presence or absence of other abnormalities such as bundle-branch block, heart block, arrhythmias, ventricular hypertrophies, drug medication, myxoedema, and abnormal atrio-ventricular conduction. Other factors such as position, build of patient, respiration, anaemia, etc., may also influence the pattern of the electrocardiogram.

(*b*) *Angina Pectoris*

The diagnosis of angina pectoris (transient myocardial ischaemia) is often difficult without the aid of the electrocardiograph. At rest, an electrocardiogram may be within normal limits. With exercise one may be able to demonstrate alterations in the form of the second component of the ventrical complex. The common changes in the electrocardiogram are (*a*) inversion of T-waves in leads i, ii, V^4, V^5 and V^6, (*b*) downward displacement of RS-T segments in leads i, ii, V^4, V^5 and V^6, frequently followed by terminally upright T-waves, and (*c*) upward displacement of the RS-T segments followed by terminal inversion of the T-waves in leads 1 and ii, and in some of the leads from the precordium.

To make a definite diagnosis of angina pectoris one should bear in mind the following important factors:

(1) A clinical history of angina pectoris with or without electrocardiographic changes in the resting electrocardiogram.

(2) Pain should be present during the time the post-exercise electrocardiogram is taken (the amount of exertion taken should be equivalent to that which ordinarily brings on pain.

(3) Alterations in the second component of the ventricular complex which appear simultaneously with the onset of pain.

It must be stressed that if there is the slightest suspicion of a fresh or recent infarction one must not perform the exercise test. Should there be changes in the ventricular complex after exercise the patient must not be allowed to return home until these changes have reverted back to the resting pattern, since an infarction may have been initiated. The changes usually disappear within 10 to 20 minutes.

(*c*) *Acute Coronary Insufficiency.* Between the syndrome of angina pectoris and frank infarction of the myocardium is the syndrome described clinically as 'coronary insufficiency'. The pain and symptoms last for several hours, and are quite difficult to distinguish from infarction. It may perhaps be explained as coronary-artery

thrombosis or occlusion not followed by infarction owing to the existence of an adequate collateral circulation.

(*d*) *Myocardial Degeneration* due to chronic coronary-artery disease can often be diagnosed only by means of the electrocardiogram. It probably represents repeated minute artery occlusions.

OTHER CONDITIONS

2. *Ventricular Hypertrophy*. The electrocardiogram is useful in diagnosing both right and left ventricular hypertrophy. The site of certain valvular lesions may be diagnosed by finding right or left ventricular hypertrophy (e.g. pulmonary regurgitation and aortic regurgitation). The right ventricular wall must be grossly hypertrophied before characteristic changes of hypertrophy appear on the electrocardiogram. Left ventricular hypertrophy is more readily diagnosed.

3. *Myocarditis*. The electrocardiogram is useful in establishing and following the course of certain inflammatory processes in which the myocardium is affected. Examples of such conditions are acute rheumatic myocarditis; diphtheric carditis; toxic carditis; allergic forms of carditis such as are caused by sulphonamides and by antidiphtheria and antitetanus sera; protozoal myocarditis; virus myocarditis; myocarditis following on bacterial endocarditis; myocarditis complicating pericarditis; and myocarditis resulting from a number of other conditions. A changing form in serial tracings indicates activity, whereas a stable electrocardiogram usually means quiescence.

4. *Pericarditis*. The electrocardiographic changes in acute pericarditis are due to injury to the subepicardial muscle layers. The RS-T segments are raised in all the precordial leads as well as in leads i, ii, VL and VF. There are no QRS changes as seen in the necrotic stage of infarction. These changes gradually regress and the electrocardiogram assumes a normal outline in a few weeks.

5. *Pulmonary Embolism*. Four types of tracings are seen in pulmonary embolism:

(1) Normal electrocardiograms, or abnormal ones (due to pre-existing heart disease) which do not change when embolism occurs.

(2) Abnormal tracings with T-wave inversions in the right-sided precordial leads.

(3) Transient right bundle-branch block.

(4) The pattern of acute cor pulmonale. This pattern is characterized by the appearance of an S-wave in lead i, and a prominent Q-wave in lead iii. The RS-T segment in lead iii may or may not be elevated. The T-wave in lead iii is inverted. The T-wave in lead i and the right-sided precordial leads are frequently inverted. Acute cor pulmonale is frequently mistaken for posterior myocardial infarction. The unipolar left-leg lead usually differentiates between these two conditions. In acute cor pulmonale there is no Q-wave, or at most a very small one in comparison with the R-wave which follows in the AVF lead. In posterior myocardial infarction there is a conspicuous Q-wave, as well as other signs of acute infarction, in the unipolar left-leg lead (AVF). The abnormal signs in cor pulmonale appear and disappear suddenly, whereas in posterior infarction they persist and become permanent. A negative electrocardiogram, however, does not exclude the occurrence of pulmonary embolism. Repeated examinations should be made.

6. *Medication control*

(*a*) *Digitalis* is the best example of a therapeutic drug which may cause dangerous myocardial poisoning. The electrocardiogram shows a characteristic sagging depression of the RS-T segment, maximum in leads V^{4-6} when there is normal or increased left ventricular dominance, or in leads V^{1-2} when there is right ventricular dominance. The depression is transmitted chiefly to lead VL or VF and thence to the appropriate standard lead according to the electrical position of the heart. At first the peak of the T-wave remains upright, but later it becomes fused into a more sharply depressed RS-T segment. The QT period is shortened. The toxicity of digitalis causes a progressive series of electrocardiographic phenomena which can be detected early. These phenomena are ventricular extrasystoles from multiple foci, prolongation of the PR interval, which may later develop into partial or complete heart block, and finally ventricular fibrillation and death. The electrocardiogram offers by far the most reliable evidence of digitalis saturation. It is thus important to ascertain whether or not digitalis was administered before the electrocardiographic examination.

(*b*) *Quinidine* causes progressive bradycardia, increase in duration and amplitude of the P-wave, slight increase in PR interval, marked increase in the duration of the QRS complex, which may develop a wide S-wave, prolongation of the QT interval, and in some cases a bundle-branch block. The T-wave usually shows progressive depression, and often becomes notched. The RS-T segment remains unchanged. The electrocardiogram is thus helpful in the control of the dosage of quinidine and in assessing the improvement in the cardiac condition for which it is being used.

7. *Arrhythmias*. The electrocardiogram is useful in the diagnosis of all arrhythmias, including auricular flutter, auricular fibrillation paroxysmal ventricular tachycardia, paroxysmal auricular tachycardia, paroxysmal nodal tachycardia, sinus tachycardia, sino-auricular block, partial heart block with dropped beats (Wenckebach type), complete heart block, ectopic beats, extrasystoles and ventricular fibrillation. Often a serious cardiac condition is complicated by one of these arrhythmias, and an early diagnosis with appropriate treatment is imperative.

SUMMARY

In general practice, electrocardiography is a useful and necessary means of arriving at a correct diagnosis in cases of myocardial infarction, angina pectoris, acute myocardial insufficiency, pulmonary embolism, pericarditis, abnormal cardiac rhythm, certain drug intoxications, myocarditis, congenital heart disease, heart block, abnormal atrio-ventricular conduction, metabolic diseases and other conditions. It is stressed that one must correlate the electrocardiographic findings with the

history and the physical signs, if one is to avoid a diagnosis that may cause unnecessary anxiety and limitations of activity of the patient. The importance of obtaining serial tracings in myocardial infarction, pericarditis, pulmonary embolism and myocarditis is explained. One must not neglect to enquire whether certain drugs have been taken. Finally one must realize that an electrocardiographic examination records only the electric activity produced by the auricles and ventricles and the course of the impulse through them, and that no element of the electrocardiogram results from the mechanical activity of the myocardium or of the valves, or directly from the state of the coronary arteries. One may thus have an electrocardiogram within normal limits from a patient with serious heart disease.

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DIE PROBLEME VAN 'N PLATTELANDSE HOSPITAAL-SUPERINTENDENT*

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Vir die suksesvolle administrasie van 'n hospitaal moet die persoon oor die nodige agtergrond betreffende ondervinding en kennis beskik asook nog die eienskappe van moed, leierskap, sterk persoonlikheid en die vermoë om met alle soorte van persoonlikhede klaar te kom, daarop nahou. Verder moet hy gewillig wees om selfs van sy nederigste werknemer te leer, in der waarheid behoort hy nooit op te hou om te leer nie. Die superintendent moet van alle markte tuis wees (*Jack of all trades*). Hy moet 'n kennis oor 'n verskeidenheid van terreine besit.

I. PERSONEEL

1. *Delegering van Magte.* By enige hospitaal is dit noodsaaklik dat die superintendent van sy magte aan personeellede delegeer aangesien hy nie alles self kan doen nie en ook omdat dit bydra om by personeel 'n verhoogde verantwoordelikheidsin te ontwikkel en daarby hulle trotsheid van prestasie aanwakker. Die plattelandse superintendent staan voor die probleem van die mate wat hy moet delegeer omdat hy nie altyd oor die geskikte persone beskik nie. Verder is die omvang van sy werksaamhede so gering, in verhouding tot 'n groot sentrale hospitaal, dat hy maklik gevaar kan loop om of *oor* of *onder* te delegeer.

2. *Prestasietrots.* Die trotsheid in prestasie het ook nou begin om selfs op die platteland te verdwyn. Die neiging tot minder werk vir meer geld word ook nou hier ondervind. Aangesien die aanbod beperk is moet jy maar tevrede wees met wat jy het en jy is te bang om 'n slegte een te ontslaan want die volgende een mag dalk nog slegter wees.

3. *Beperkte Getalle.* Meesal word daar op die platteland oor slegs 'n enkele persoon wat 'n besondere diens kan verrig, beskik (fisioterapeut) en wanneer daardie persoon met verlof is of weggaan word baie moeilikhede ondervind om sy plek te vul—dikwels moet daardie departement vir die tydperk gesluit word met gevolglike ophoping van werk en algemene ontevredenheid. Verder wanneer een personeellid met verlof gaan is daar veel minder eenhede onder wie sy werk verdeel kan word.

4. *Huisdokters.* Huisdokters word alle moontlike ondervinding gegun en dit is noodsaaklik dat hul 'n tydperk in 'n plattelandse hospitaal deurbring. Dit gebeur egter soms op die platteland dat waar hul onder 'n deeltydse geneesheer moet werk hulle òf min geleentheid kry om ingrepe self te doen omdat die geneesheer nie die tyd het om toesig te hou nie of anders dat ingrepe aan hulle oorgelaat word wat hulle streng gesproke nie behoort te doen behalwe onder toesig.

5. *Tegniese Personeel.* Geneeshere (huisdokters), fisioterapeute, radiografiste, diëetkundiges, e.a. is nie geneig om na plattelandse hospitale aansoek te doen nie. Die gevolg is dan dat die personeel in hierdie afdelings nooit op sterkte is nie en dat sommige departemente nie kan funksioneer nie.

6. *Vakmanne.* 'n Plattelandse hospitaal kan gewoonlik nie 'n gekwalifiseerde vakman vir elk van die verskillende vakke daarop nahou nie. Die gevolg hiervan is dat 'n persoon wat in een vak opgelei of halfopgelei is verantwoordelik vir die werk in meer dan een vak is met gevolglik wisselende sukses.

7. *Verlies van Personeel.* Die ondervinding wat 'n persoon in 'n plattelandse hospitaal opdoen is veel meer doeltreffend vir die opleiding van veral klerklike en administratiewe personeel want een persoon moet meer as een aspek van die werk kan behartig met die gevolg dat die persone 'n baie beter oorsig en insig in die werking van die hospitaal het as die klerk wat in een rigting in 'n sentrale hospitaal, spesialiseer en van niks verder iets weet nie. Die nadeel is egter dat so 'n personeellid, wat enigsins iets werd is, spoedig na 'n sentrale hospitaal of 'n ander werkkring, vertrek.

*'n Referaat ingedien op die Suid-Afrikaanse Mediese Kongres te Port Elizabeth, Junie 1954.

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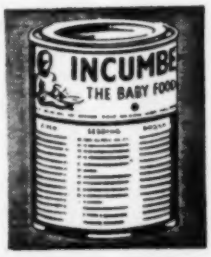

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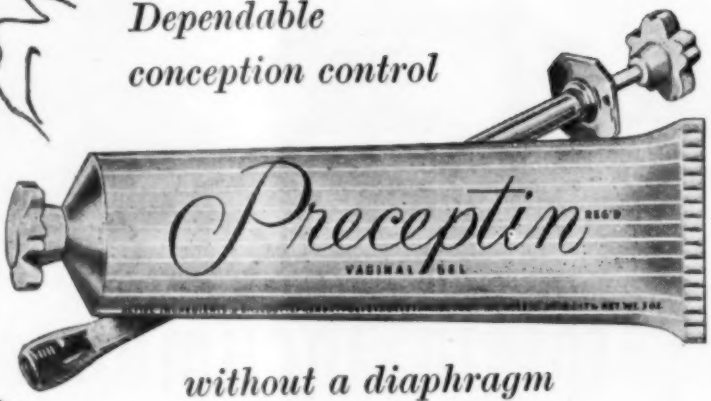

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8. *Vakante Poste.* Wanneer vakante poste adverteer word is die getal applikante wat belangstel gewoonlik gering met die gevolg dat die keuse onder hierdie omstandighede noodwendig beperk moet wees. Dikwels is dit noodsaaklik om die beste uit 'n groep swak aansoeke aan te stel aangesien 'n swak eenheid beter is as geen eenheid nie.

9. *Ontspanningsaangeleenthede.* Die ontspanningsfasiliteite wat op meeste plattelandse dorpe beskikbaar is is beperk met die gevolg dat personeel nie gelukkig is nie. Dit beïnvloed hul werkvermoë en gee aanleiding tot die neiging vir personeel om voortdurend te verwissel.

II. PASIËNTE

1. *Beddetal.* Die meeste hospitale op die platteland is vir die bevolkingstal beplan wat voor Wêreldoorlog II in die omgewing woonagtig was. Die gevolg is dat die ruimte totaal ontoereikend geword het, as gevolg van die snelle bevolkingsaanwas op die platteland. Verder moet onthou word dat die getal mense in die hoër ouderdomsgroepe in verhouding groter op die platteland as in die stede is—en dis juis hierdie groep waaruit die meeste mense kom wat hospitaalbehandeling nodig het. Die toestand is egter dat geen langtermyngevalle in die hospitaal gehou kan word nie omdat daar nie eers genoeg plek vir die akute en korttermyn pasiënte beskikbaar is nie.

2. *Naturelle.* Die meeste naturelle op die platteland leef nog in stamverband en het baie bygelowe en gewoontes wat aan die blanke vreemd is. Die naturel neem baie meer tyd en geduld in beslag. Die personeel moet die naturel verstaan en weet hoe om met hom te werk. Ongelukkig weens die beperkte keuse van personeel word nie altyd die geskikte persone gekry om met die naturel te werk nie.

3. *Vervoer.* Die verantwoordelikheid vir die vervoer van pasiënte berus by die Unie-regering en sekere plaaslike owerhede. Dit gebeur dikwels dat dit noodsaaklik word dat 'n pasiënt vir verdere behandeling na 'n sentrale hospitaal oorgeplaas word. Die Unie-regering is meesal nie bereid, behalwe in uitsonderlike gevalle, om 'n pasiënt verder as die eersvolgende dorp per ambulans te vervoer nie met die gevolg dat hierdie pasiënte meesal per trein gestuur moet word en van 'n verpleegster vergesel moet gaan terwyl jy reeds min personeel het.

4. *Spesiale Diëte.* Vanweë die feit dat daar nie oor die nodige opgeleide personeel in die kombuis beskik word nie is dit dikwels moeilik om pasiënte op spesiale diëte te plaas.

5. *Hospitaalbesmetting.* Aangesien daar meesal nie oor die geriewe, vir die afsondering van kinders vir die eerste paar dae na toelating bestaan nie, is hospitaalbesmetting in die kindersaal 'n probleem waarmee die plattelandse superintendent dikwels te kampe het.

6. *Aansteeklike Siektes.* Weinig van die plattelandse dorpe beskik oor 'n afsonderingshospitaal met die gevolg dat hierdie gevalle dikwels in die hospitaal verpleeg moet word met die gevolglike gevare waaraan die ander pasiënte blootgestel word.

III. MENSLIKE VERHOUDINGS

1. *Superintendent tot Geneeshere.* Dit is nog nie baie lank dat die meeste plattelandse hospitale oor voltydse geneeskundige superintendente beskik nie. Dit gebeur keer op keer dat van die ou gevestigde geneeskundige praktisyns die hospitaal as hul privaatbesit beskou en nie gewillig is om hul by die reëls en regulasies wat vir die hospitaal opgestel is, neer te lê nie.

2. *Personeel tot Pasiënt.* Die verhouding tussen pasiënt en personeel op die platteland is baie meer persoonlik as in 'n groot sentrum. Dit het sy voor- en nadele: (*a*) Pasiënt ken die personeel persoonlik en het derhalwe meer vertroue as wat die geval sou wees in 'n groot sentrum. (*b*) Die nadeel is omdat almal mekaar ken kan dit gebeur dat personeel pasiënt met hul eie familielede bespreek.

3. *Personeel Onderling.* Die personeelsterkte aan 'n plattelandse hospitaal is baie kleiner dan in 'n sentrale hospitaal en juis om hierdie rede is die omvang baie wyer in verhouding wanneer daar 'n botsing tussen twee personeellede by 'n plattelandse hospitaal plaasvind. Personeellede moet noodwendig meer dikwels met mekaar in aanraking kom en kan dus nie so maklik uitmekaar se pad uit wegbly as in die geval van 'n sentrale hospitaal met sy groot personeel nie. Die onderlinge verkeer tussen personeellede buitekant die hospitaal is nouer en dikwels het hul struwelinge buite hul werkkring 'n uitwerking op hul verhouding tot mekaar binne die hospitaal.

IV. UITRUSTING EN MEDIKAMENTE

1. *Uitrusting.* Die plattelandse superintendent staan voor die probleem tot watter mate hy apparaat, vir toestande wat af en toe voorkom, moet aankoop. Soms gebeur dit dat 'n bepaalde geneesheer 'n besondere apparaat wil hê en wanneer die geneesheer vertrek is daar geen ander geneesheer wat dit wil of kan gebruik nie met die gevolg dat die instrument 'n dooie verlies word.

2. (*a*) *Dringende Medisynes.* Al te dikwels gebeur dit dat besondere medisynesoorte dringend benodig word. Soos dit gewoonlik onder sulke omstandighede die geval is, is die stof slegs in 'n groot sentrum verkrygbaar en dan moet die versending daarvan per spoor of pos afgewag word. Dit is onprakties en onekonomies om voorrade vir elke *moontlike* gebeurtenis by 'n plattelandse hospitaal voorhande te hou. Dikwels word net 'n beperkte voorraad van 'n besondere stof wat vir normale gebeurlikhede voldoende sal wees gehou, en dan kom daar ineens 'n epidemie en die voorraad is al spoedig uitgeput.

2. (*b*) *Duur Medisynes.* Die geneeshere wat aan die plattelandse hospitaal verbonde is, is meesal algemene praktisyns (bedoel dit geensins verkleinerend nie). Die superintendent kom dan voor die vraagstuk te staan of hy nuwerwetse medisynes moet verskaf of nie. Sover dit duur medisynes betref staan hy dikwels voor die keuse van: 'n pasiënt langer in die hospitaal hou op goedkoper medisynes of moontlik korter in die hospitaal op duurder medisynes?

Verder, is die geneesheer se diagnose van 'n toestand waarvoor 'n duurder medisyne spesifiek is, altyd juis?

2. (*c*) '*Shotgun Therapy*'. Dit is jammer maar waar dat veral in sommige plattelandse hospitale waar daar nie die nodige leiding bestaan nie daar die neiging is om skrootterapie op pasiënte toe te pas. Soos te verstane is dit maar moeilik vir die Superintendent om hierteen op te tree.

3. *Laboratoriumfasiliteite*. Die omstandighede op die platteland is van so 'n aard dat die meerderheid van laboratoriumtoetse elders uitgevoer moet word. Dit bring noodwendig meer onkoste mee: (*a*) Koste verbonde aan die ondersoek self. (*b*) Koste vir die hospitalisering van die pasiënt terwyl die resultaat van die ondersoek afgewag word voordat pasiënt op regte behandeling geplaas kan word. In die praktyk word meesal ondervind dat die pasiënt, terwyl die resultaat van die laboratoriumondersoek afgewag word, met 'n verskeidenheid van preparate behandel word wat dan later blyk 'n totale vermorsing te gewees het.

4. *Wassery*. In Transvaal bestaan daar 'n stelsel waarvolgens sekere hospitale hul vuil wasgoed na 'n sentrale provinsiale wassery moet stuur. Dit gebeur dan soms dat daar 'n vertraging by die wassery of by die Spoorweë plaasvind met die gevolg dat daar 'n tekort aan skoon linne in die hospitaal ondervind word.

V. VOEDSELVOORSIENING

1. *Groente en Vrugte*. Die keuse van groente- en vrugtesoorte is meesal nie wyd op die platteland nie weens klimaatsomstandighede en die verskillende jaargetye. Die personeel sit met hul hande in die hare om voldoende hoeveelhede en 'n genoegsame verskeidenheid op te dis en daarby raak die pasiënte ontevrede weens die min afwisseling in die voedselsoorte. In sommige gevalle gebeur dit dat groente en vrugte vanaf die groot sentra na die platteland gestuur word en dikwels is die voorrade nie meer vars nie en daarby kom nog die vervoerkoste.

2. *Melk*. Die pasteurisering van melk is 'n onbekende ingreep op meeste plattelandse dorpe met die gevolg dat daar die bykomstige ergernis is om alle melk te kook. Verder beskik weinig van die plattelandse dorpe oor die dienste van 'n gesondheidsinspekteur wat die nodige toesig kan hou oor die winning en hantering van die melk wat aan die hospitaal verskaf word.

3. *Vleis*. Tensy die plaaslike munisipaliteit die nodige gekwalifiseerde personeel het om toesig oor die slag van vee te hou, kan jy nie altyd seker wees dat die vleis wat aan die hospitaal gelewer word, gesond is nie. Sentrale hospitale beskik dikwels oor 'n personeellid wat 'n gekwalifiseerde slagter is terwyl jou personeel op die platteland nie in die vermoë is om te oordeel of die graad van die vleis en die dele wat verskaf word in ooreenstemming met die kontrak en bestelling is nie.

VI. DIENSTE

1. *Krag*. Die stroomspanning van die plaaslike kragvoorsiening op die platteland is dikwels so swak dat dit die gebruik van sommige apparaat onmoontlik maak.

2. *Water*. Op die platteland is die hospitaal vir die voorsiening van sy water afhanklik van die plaaslike owerheid wat maar al te dikwels oor 'n wisselvallige watervoorraad beskik, of van eie boorgate.

3. *Riolering*. 'n Spoel-rioolstelsel op die platteland waar die plaaslike owerheid nie daarvoor voorsiening maak nie bring die bykomstige las dat die hospitaal vir die ontslae raak van die rioolvuil verantwoordelik word. 'n Verdere probleem is dat die plattelandse naturel nie bekend is met 'n spoelrioolstelsel en enige ding daarin gooi met gevolglik voortdurende verstoppings.

4. *Brandbestryding*. Baie min plattelandse plaaslike owerhede beskik oor geriewe vir brandbestryding en daarby is die drukking van die water meesal so swak dat 'n vuur met moeite bestry sal kan word.

VII. ALGEMEEN

Die indruk word dikwels geskep dat die owerhede nie met plattelandse omstandighede vertroud is of nie 'n genoegsame insig daarvan het nie. Dit wil voorkom of die meeste voorskrifte opgestel word met die sentrale hospitale in gedagte en dan moet die plattelandse hospitaal dit uitvoer.

OORSIG EN AANBEVELINGS

1. *Superintendent se Diskresie*

Die gebruik van diskresie is een van die moeilikste maar tog belangrikste aspekte van 'n plattelandse hospitaalsuperintendent se werksaamhede. Die sukses van sy werk sal tot 'n groot mate afhang, beide binne sowel as buite die hospitaal, van die mate en wyse waarop hy sy diskresie uitoefen.

2. *Medikamente en Apparaat*

(*a*) *Voorrade*. Ek is van sienswyse dat 'n plattelandse hospitaal *binne redelike* perke voorrade van verskillende medikamente en apparaat vir die mees moontlike gebeurlikhede voorhande moet hou. Die superintendent moet nie van standpunt uitgaan dat sy hospitaal so volledig moontlik uitgerus moet wees nie. Dit is weer hier 'n geval van die uitoefening van diskresie.

(*b*) *Apparaat wat nie Gebruik word nie*. Wanneer een hospitaal nie 'n bepaalde apparaat om een of ander rede kan gebruik nie behoort die nodige masjinerie ingestel te word vir die oorplasing daarvan na 'n ander hospitaal waar dit wel ten volle benut kan word.

(*c*) *Apparaat teenoor Arbeidskragte*. Dit is my eerlike sienswyse dat dit op die lang duur meer prakties asook ekonomies is om, waar doenlik, arbeidseenhede met masjiene te vervang. Daar is die inisiële uitgawe vir die masjien se aankoop terwyl salarisse maand na maand betaal moet word.

(*d*) *Nuwerwetse en Duur Medisynes*. Die plattelandse hospitaal behoort nie toegelaat te word om nuwe middele uit te toets nie—dit behoort aan die sentrale hospitale, met hul spesialiste, oorgelaat te word. Wat die gebruik van duur medisynes betref, is my standpunt dat waar 'n diagnose seker is, moet die duurder medisyne, altyd onder die superintendent se kontrole, toegedien word om sodoende die tydperk van hospitalisering, indien moontlik, te verkort. Dit is vanuit 'n eenheids-

koste sowel as 'n sosio-ekonomiese standpunt gesien, gesond.

3. *Tegniese Personeel*

Ek wil graag aan die hand doen dat elke provinsie die aansoeke sentraal hanteer en dan die persone na hospitale stuur.

4. *Navraagburo*

Die plattelandse hospitaal staan dikwels voor die probleem, wanneer nuwe apparaat aangekoop moet word, van watter apparaat die mees geskikte vir sy besondere doel sal wees. Hy weet nie watter ander hospitale oor die apparaat beskik wat hy wil aankoop sodat hy daar om raad kan aanklop.

Dikwels word 'n eenvoudige apparaat benodig wat maklik deur die hospitaal se werktuigkundige indien hy oor die spesifikasies beskik het, gemaak kan word. Deurdat die werktuigkundige egter nie in die geleentheid is om na die apparaat te gaan kyk nie, staan die plattelandse hospitaal voor die keuse om of ten duurste te betaal of daarsonder klaar te kom.

Verder, 'n handelsreisiger kom by die hospitaal aan en raak allerhande wyshede omtrent die hoedanighede van sy produk kwyt, dit klink vir jou goed en jy sou dit graag wou gebruik maar soms met skadelike gevolge (ek verwys nie hier na medisynes wat in geneeskundige tydskrifte bespreek word nie).

In die lig van die voorgaande wil ek graag aan die hand doen dat 'n deel in die Suid-Afrikaanse Tydskrif vir Geneeskunde vir 'n navraagburo opsy gesit word of, indien dit nie moontlik is, dat die Unie-regering tesame met die vier provinsies die instelling van so 'n diens oorweeg hetsy deur die uitgee van 'n maandelikse rondskrywe of deur 'n persoon aan te stel aan wie die navrae gerig kan word en wat dan die nodige inligting kan versamel en verstrek.

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REVISION SERIES

IV THE USE OF HORMONES IN GYNAECOLOGY AND OBSTETRICS

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There is no doubt that endocrinal preparations in obstetrics and gynaecology have yielded disappointing results. After extravagant initial claims, the limitations of many of the hormones are now becoming obvious; moreover, the conclusions and results of experimental work on animals should not be applied uncritically to human subjects; nor is the biochemist providing as much guidance as was hoped in the therapeutic use of these substances.

It is proposed here to discuss those conditions in which the use of hormones holds out fair hopes of success, and also to mention certain conditions in which, though their use meets with equivocal results, no better alternative measure exists.

A. OESTROGEN

This hormone is secreted primarily by the Graafian follicles of the ovary in response to stimulation by the follicle-stimulating hormone (FSH) of the anterior pituitary gland; it is responsible among other things for the endometrial changes occurring in the first half of the menstrual cycle.

Preparations

There are two main groups, viz.: (1) the natural oestrogens, e.g. oestradiol and its derivatives, e.g. ethinyl oestradiol; and (2) the synthetic oestrogens, e.g. stilboestrol, dinoestrol and hexoestrol.

Oestradiol has to be administered by injection; its effect can be prolonged by combining it with benzoic or propionic acid to form oestradiol benzoate or dipropionate, when it need not be given more than twice a week. In therapeutic doses these natural oestrogens have no unpleasant side-effects. *Ethinyl oestradiol* is an exceedingly potent orally-administered oestrogen, 10 or 20 times as potent as stilboestrol, but toxic effects are less common. *Stilboestrol* is the oestrogen most frequently used. It is highly potent and is more likely to produce unpleasant side-effects than either dinoestrol or hexoestrol, but when given in small doses (by mouth) these effects are usually absent. (The relative potency of the synthetic oestrogens is given by Bishop *et al.*[1] as: stilboestrol 36, dinoestrol 9, hexoestrol 2.)

Routes of Administration

Oral.—This is the ideal route and is usually practicable with stilboestrol.

'*Buccal*'.—By this route absorption is supposed to take place directly into the systemic circulation and so by-pass the liver, where oestrogen is inactivated. It is doubtful whether in practice this route has any advantage over the oral one.

Parenteral.—Natural oestrogens are given by intramuscular injection.

Implantation.—This route has very limited use and is ordinarily undesirable because it may result in un-

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controllable uterine bleeding. It is therefore to be considered only in a patient who has undergone hysterectomy.

Local application as a suppository or cream is useful in conditions such as senile vaginitis and kraurosis vulvae.

Oestrogen given in large doses for long periods can inhibit the gonad-stimulating function of the pituitary, as well as cause painful breasts or water retention with rapid gain in weight. It is true that prolonged administration may be necessary in the management of the menopausal syndrome, but the dose must then be kept small. However, when oestrogen is used for menstrual disturbances in younger women, it should be given in courses of not more than 3 weeks' duration, with a week's rest between courses.[2] Stilboestrol is much more toxic than the natural oestrogens but in doses of less than 0·5 mg. daily toxic effects are uncommon.

There is no clinical evidence that the administration of oestrogens can stimulate the production of cancer in the human subject; all evidence of carcinogenic activity of oestrogens is based on animal experiments.[3]

Uses

1. *Menopausal Syndrome.* The symptoms of this syndrome are thought to be due to the unopposed action of the follicle-stimulating hormone (FSH) of the anterior pituitary. They will usually be controlled by stilboestrol given by mouth, but the dose must be kept small; initially it should be prescribed in doses of 0·1 mg. twice daily for 2-3 weeks, and if the symptoms are not then controlled the dose can be stepped up slightly for a further 2-3 weeks and so on. Once the symptoms are under control the dosage can be maintained for 8-10 weeks and then reduced gradually, so as to prevent the uterine bleeding of withdrawal.

2. *Spasmodic Dysmenorrhoea.* It must be emphasized that hormones should not be the first line of treatment here. Oestrogens produce a painless period by suppressing ovulation; the usual dose of stilboestrol necessary to do this is at least 2 mg. daily, starting as early in the cycle as possible, preferably on the first day of the period and continuing for 14 days. An interval of at least one week should elapse between courses. Such courses may be alternated with a course of stilboestrol given for a week premenstrually, which may diminish pain, though not by suppressing ovulation. This treatment is purely symptomatic and when discontinued the dysmenorrhoea returns.

3. *Senile Vaginitis.* This is an atrophic condition of the vagina with a superimposed infection. It is associated with a thin, purulent discharge and occasionally with slight bleeding. Should the latter occur in the menopausal or post-menopausal patient, great care should be taken in ruling out cancer higher up in the genital tract. It may be treated successfully by the use of oestrogen vaginal suppositories—1,000 units daily for 2-4 weeks.

4. *Kraurosis Vulvae.* This condition not infrequently coexists with senile vaginitis. It is an atrophic affection involving the labia minora and vestibule and producing initially a shiny surface with bright red or purplish patches. In this stage oestrogen vaginal suppositories supplemented by small doses of oral oestrogen constitute effective treatment.

5. *Severe Metropathic Uterine Bleeding.* 5-10 mg. of stilboestrol given 4-hourly or more frequently, depending on the severity of the bleeding, will usually produce haemostasis within 36-48 hours. This should be followed by a daily maintenance dose for about a week; following this some withdrawal bleeding will probably occur. If there are unpleasant toxic effects ethinyl oestradiol may be used instead of stilboestrol.

6. *Endometriosis.* Successful results have been reported recently with intensive oestrogen therapy in cases of endometriosis.[4] Relief of constant severe backache often follows, and also regression of palpable pelvic lesions. Stilboestrol is given daily in 5 mg. doses, with a weekly increase of the daily dose by 5 mg., for a period of 3-6 months.

7. *Amenorrhoea.* The use of hormones in the treatment of amenorrhoea, whether primary or secondary, is not at all satisfactory. In primary amenorrhoea one can sometimes induce withdrawal bleeding by using stilboestrol cyclically in small doses for 14 days at a time. Occasionally normal menstrual periods will result after a few months' treatment. If not, stilboestrol and progesterone may be given in cyclical fashion to imitate the normal cycle; the therapy is, of course, purely substitutional.

The same regime may be followed in cases of secondary amenorrhoea where this is not part and parcel of some obvious endocrine entity or systemic disorder. The addition of small doses of thyroid is not infrequently beneficial in helping to bring on the periods.

The administration of hormones should of course be considered only after full investigation of the case and will depend on the particular type of deficiency in the pituitary-ovarian-uterine relationship. On the whole, however, the results are poor.

8. *Engorgement of the Lactating Breast.* A single dose of stilboestrol, 5-10 mg., may abort a case of early engorgement of the breasts. The situation must be reviewed every 4 hours and the same or a larger dose repeated if necessary. Other measures, such as firm support of the breasts and expression of milk, must of course also be carried out. A slight decrease in milk secretion may follow but it will usually return to normal in a few days.

9. *Inhibition of Lactation.* This can be successfully accomplished by giving stilboestrol 2 mg. thrice daily for 6-7 days and gradually reducing the dose over the next 3-4 days. It is easier to prevent lactation than to stop it once it has started.

10. *Intra-uterine Death of the Foetus.* It was claimed at one time that the administration of oestrogen was specific in getting the uterus to empty itself of a dead foetus, but this has not been borne out by results. It may, however, be worth while trying oestradiol benzoate, 4 mg. intramuscularly every 8 hours for a period up to 7 days.

11. *Hypotonic Uterine Inertia.* Very occasionally the injection of oestradiol benzoate, 5 mg. every 4 hours for 3-4 doses, seems to be followed by normal uterine action; here again it is of doubtful value.

12. *Diabetes Mellitus in Pregnancy.* An improved foetal survival rate has been reported by White [5] in a series of pregnant diabetic women treated with oestrogen and progesterone. But other workers have had equally good results by maintaining careful and adequate control of the diabetes.

13. *Threatened Abortion.* The use of oestrogen in this condition has been as unconvincing as that of progesterone.

B. PROGESTERONE

This hormone is secreted by the corpus luteum of the ovary and together with oestrogen brings about the endometrial changes in the second half of the menstrual cycle.

Preparations. In its natural form progesterone can be given only by injection and as it is unable to form an ester it is short-acting. Ethisterone is a progesterone derivative which is given by mouth.

Uses

1. *Metropathia Haemorrhagica.* The severe bleeding of this condition can be controlled with progesterone, which diminishes the sensitivity of the endometrium to oestrogen. However, this may take as long as 7 days and the use of oestrogen for this purpose is therefore preferable.

When once the severe bleeding has stopped progesterone or preferably ethisterone, 60 mg. daily, may be given for a week; shedding of the endometrium with moderate bleeding follows within a few days of withdrawal of the drug. The course is repeated every 4 weeks and a subsequent bout of severe bleeding prevented. This treatment is to be considered only in a youngish woman.

2. *Amenorrhoea.* Progesterone can be used to ascertain whether the ovaries are secreting oestrogen. If they are doing so, a single test dose of 50 mg. will be followed by bleeding in 4-5 days.

Progesterone can also be used together with oestrogen in cyclical fashion to mimic the normal menstrual cycle; this is discussed above.

3. *Habitual Abortion.* Progesterone is of doubtful value here; it is supposed to improve the quality of the endometrium and therefore the chances of successful embedding of the fertilised ovum. It should be given in the second half of several menstrual cycles preceding pregnancy and then for the first 18-20 weeks of the pregnancy. Implantation of 6 progesterone pellets of 25 mg. each is a useful route of administration.

4. *Threatened Abortion.* No convincing evidence exists that progesterone has the slightest effect in preventing abortion once it is threatening. It is even possible that the hormone may hasten it, for although it lessens the number of uterine contractions, the amplitude of each individual contraction is increased.

C. TESTOSTERONE

This is secreted by the interstitial cells of the testis.

Preparations. Methyltestosterone is given by mouth, while an esterified testosterone, testosterone propionate, has a prolonged action and is given by intramuscular injection.

Dangers of Administration. There is considerable variation in the susceptibility of individual patients to testosterone [6] and occasionally there may be *growth of hair on the upper lip* following relatively small doses. However, hirsutism is unlikely to occur if doses are kept small and the administration is not too prolonged. *Acne* not infrequently occurs, while *hyperaemia of the vulva and clitoris* is also quite common. With large doses of androgens there may be *hypertrophy of the clitoris.* (All these changes are usually completely reversible although complete return to normal may take a few months.[7]) *Development of the male type of voice* occurs only with large dosage; very occasionally the voice changes are permanent.

In view of these dangers of masculinization, testosterone should be avoided where another hormone can be used with equal chance of success. A safe dosage is 10 mg. of methyl testosterone daily, with a maximum of 300 mg. in one month.[8] The treatment should not be continued for more than 2 months at a time, with at least 1 month between courses.

Uses

1. *Premenstrual Tension Syndrome:* The symptoms are headache, irritability and a feeling of bloatedness, usually relieved by salt and fluid restriction and oral ammonium chloride during the second half of the menstrual cycle. If this fails, testosterone 5 mg. daily for 10 days before the onset of the period will prove successful.

2. *Diminished Libido:* Testosterone may be successful in increasing libido by producing an increased vascularity of the vulva and sensitivity of the clitoris.

3. *Menorrhagia* of uncertain dysfunctional origin in which periods are prolonged but regular will sometimes respond to methyltestosterone. Its action is purely empirical.

4. *Metropathia Haemorrhagica:* Severe bleeding associated with this condition can be controlled by the use of testosterone but the hormone takes 5-7 days to act, which it does by inhibiting the anterior pituitary and suppressing the excessive production of oestrogen.

5. *Endometriosis:* Testosterone may relieve the dysmenorrhoea in some cases.

6. *Menopausal Symptoms* can be controlled with testosterone but its use is indicated only when stilboestrol is contra-indicated for some reason or other. The use of a preparation combining both of these hormones seems to have no advantage over the use of either alone.

D. PITOCIN

This is the oxytocic principle secreted by the posterior pituitary. When given intramuscularly, within 2 minutes it produces a powerful uterine spasm which is maintained for about 8 minutes, followed by frequent strong contractions; the effect is spent in about ½ hour. When given directly into the uterine muscle it acts in about 15 seconds, with full action at 45 seconds.[9]

Dangers of Administration. Very rarely an injection of pitocin is followed by shock and collapse, said to be caused by constriction of the coronary vessels.

Uterine response varies markedly from one patient to another; whereas a dose of 1 minim may be quite ineffective in one case, it may cause spasm in another violent enough to kill the foetus if given in the first or second stages of labour. Occasionally the spasm is localized and a contraction ring results. If there is some degree of disproportion or obstruction, the violent uterine action may result in rupture of the uterus. Its use is therefore contra-indicated in the presence of malpresentation, obstruction or even mild cephalo-pelvic disproportion, as well as in a patient who has previously undergone Caesarean section.

Uses

1. *Inevitable or Incomplete Abortion.* In the case where bleeding is not severe, or immediate surgical evacuation is not indicated, pitocin (or preferably pituitary extract [9]) may be employed to empty the uterus. A suitable dosage is 5 units given intramuscularly every 2 hours for 6 doses.

In cases of missed abortion or hydatidiform mole, pitocin may be administered in an attempt to get the uterus to empty itself.

2. *Induction of Labour.* In the last 2 weeks of pregnancy and in cases of postmaturity pitocin is often given after the customary castor oil, hot bath and enema in order to induce labour. On the whole the results of this treatment are not convincing, although the nearer the pregnancy is to full-term (or if it has gone beyond full-term) the more likely it is to be effective.

3. *Uterine Inertia.* There are many authorities who deprecate the use of pitocin in the first 2 stages of labour. Recently it has been used by way of an intravenous drip of glucose saline in cases of hypotonic uterine inertia; the recommended dose is 10 units of pitocin in 2-10 litres of fluid. In this dilute form very accurate control can be exercised over the amount the patient receives. This regime can be carried out only in a fully-equipped maternity unit where adequate and constant medical and nursing supervision can be exercised.

4. *Caesarean Section.* Immediately after the delivery of the child, 10 units of pitocin may be injected directly into the uterus to hasten the separation of the placenta and reduce the amount of bleeding.

5. *Postpartum Haemorrhage.* Pitocin has largely been replaced by ergometrine but is still an excellent means of stopping postpartum haemorrhage. It should preferably be used only after expulsion of the placenta, but it can certainly be employed in cases of severe bleeding in the third stage, although a constriction ring may form and imprison the placenta. In the circumstances this complication is naturally of secondary importance.

E. *Thyroid Extract:* by mouth is a useful adjunct in the management of habitual abortion, infertility and amenorrhoea, even in the absence of signs of hypothyroidism. Its action is empirical but it is reputed to stimulate pituitary and ovarian function.

F. *Pituitary Gonadotrophins.* These are: (*a*) follicle-stimulating hormone (FSH), (*b*) luteinizing hormone, and (*c*) prolactin. They have little if any therapeutic value.

SUMMARY

1. Some of the therapeutic uses of hormones in gynaecology and obstetrics are discussed. Their routes of administration are mentioned and disadvantages pointed out.

2. Oestrogens are useful in the menopausal syndrome, senile vaginitis, early kraurosis vulvae, severe metropathic bleeding, and engorgement of the breasts, and in the inhibition of lactation.

3. Progesterone can sometimes be employed with some success in the management of metropathic uterine bleeding.

4. Testosterone finds useful application in premenstrual tension, dysfunctional menorrhagia and endometriosis.

5. Pitocin is useful primarily in the control of postpartum haemorrhage but can also be employed in the management of inevitable, incomplete or missed abortions.

6. Thyroid extract is a useful adjunct in the treatment of amenorrhoea, infertility and habitual abortion.

7. The pituitary gonadotrophins are of very doubtful therapeutic value.

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ASSOCIATION NEWS : VERENIGINGSNUUS

MINUTES OF THE ANNUAL GENERAL MEETING OF THE MEDICAL ASSOCIATION

Following are the minutes of the Annual General Meeting of the Medical Association of South Africa, held at the Hotel Assembly, Pretoria, on Thursday 28 October 1954, at 9.30 a.m.

Dr. J. P. Collins of Kimberley (President of the Association) was in the Chair. Forty-seven members were present in person, while 10 members were represented by proxy. Dr. Collins declared the meeting properly constituted.

1. *Minutes* of the last Annual General Meeting, held at Kimberley on 15 October 1953, were taken as read. They were *confirmed and signed.*

2. *Annual Report of Chairman of Federal Council:* This had been published in the *Journal* of 24 July 1954, and was taken as read. It was proposed by Dr. Sichel, seconded by Dr. Chapman and *resolved* that the Annual Report of the Chairman of Council be adopted.

There were no questions arising out of the Report.

3. *Financial Statement and Balance Sheet:* These had been published in the *Journal* of 10 April 1954. The Honorary Treasurer (Dr. J. S. du Toit) amplified the report, stating that the deficit on the year's working has been caused mainly by a loss sustained in the Agency Department. He added that the audited Statement of the Benevolent Fund was also available, should members wish to have information.

No questions were asked either in regard to the Association's accounts or the Benevolent Fund accounts.

It was then proposed by Dr. du Toit, seconded by Dr. Armitage and *resolved* that the Financial Statement be adopted.

4. *Election of Auditors:* It was proposed by Dr. J. S. du Toit, seconded by Dr. Lee and *resolved* that Messrs. Gurney, Notcutt and Fisher be re-elected as the Association's auditors for the year 1954, at the same remuneration of £200 as had been paid to them in 1953.

5. *Induction of President* Dr. Collins then inducted Dr. L. E. Lane, of Port Elizabeth, as President of the Association, *amid acclamation.* Dr. Lane then took the Chair.

Dr. Collins expressed appreciation of Dr. Lane's help to him during the recent Congress at Port Elizabeth, and thanked the Council for having elected him to be the President of the Association for the past year. He added that as he represented a small Branch of the Association, he felt that the honour had been not only his but had also been conferred on his Branch. It had been a particularly great pleasure to him to have been President during the Congress at Port Elizabeth, and he expressed his deep appreciation on behalf of himself, his wife and family, his Branch and the City of Kimberley. *Acclamation.*

Dr. Sichel said that it gave him great pleasure, on behalf of all present, to express appreciation and thanks to Dr. Collins for all that he had done as President during the past year. He felt that with the decision of Federal Council to divide the offices of President and Chairman, things had proceeded very well and to the satisfaction of all. We now had the pleasure of seeing men from smaller areas within the Association receiving the honour of election to the Presidency. He spoke appreciatively of the efficiency and dignity with which Dr. Collins had carried out his high office. *Acclamation.*

The newly-inducted President, Dr. Lane, said that he had always felt, in the words of Bacon, a great indebtedness to his profession. It affected him profoundly that his humble contribution should receive the signal honour which had been bestowed on him, and with the example which had been set by previous Presidents he would do his best to justify the confidence placed in him. *Acclamation.*

The President then declared, at 9.50 a.m., that the meeting should stand adjourned until 8 o'clock that evening at the same place.

ADJOURNED GENERAL MEETING

Dr. N. L. Murray, President of the Northern Transvaal Branch of the Association, opened the meeting at 8.15 p.m. On behalf of his Branch he expressed pleasure in welcoming delegates and guests. He mentioned that the Federal Council of the Association had delegates from all Provinces of the Union and South-West Africa, and that this was the first occasion on which it had met in Pretoria unassociated with a Medical Congress. He said that he considered it appropriate to say here that the members of his Branch hoped that the next Medical Congress would take place in Pretoria in October 1955, during Pretoria's Centenary celebrations. He also extended good wishes to the Federal Council for a successful and pleasant meeting. *Acclamation.*

He then introduced the Mayor and Mayoress of Pretoria.

The Mayor (Dr. Muller) extended a welcome to the guests in both English and Afrikaans. He said that it was always a pleasure to be associated with the medical profession, for whom the public held great respect. It was also a pleasure to be associated with the profession through Pretoria's Medical School, towards whose establishment the City Council had been proud to make a contribution. He welcomed the idea of a Medical Congress in Pretoria during the Centenary Year. In conclusion he expressed the hope that the Federal Council meeting would be a very successful one and that those who had come from other centres would take back pleasant memories of their stay in Pretoria. *Acclamation.*

The President (Dr. L. E. Lane) then took the Chair *amid acclamation* and called on Dr. Sichel (Chairman of Federal Council) to reply to the Mayor.

In thanking the Mayor for his words of welcome, Dr. Sichel said that the delegates appreciated very much being in Pretoria, and that, speaking for himself, he was no stranger to the city as he had attended previous Congresses there. He hoped that he would be able to be present the following year and that he might have the renewed pleasure of again thanking the Mayor for his welcome.

As a member of the Executive Committee of the National Road Safety Organization, he complimented the Mayor on the efficient way in which traffic and pedestrians were controlled in Pretoria. In conclusion he again expressed appreciation of the Mayor's remarks and of the opportunity of seeing the very beautiful city of Pretoria. *Acclamation.*

On behalf of the Association, Dr. L. O. Vercueil thanked the Northern Transvaal Branch for its invitation to hold the Federal Council meeting in Pretoria.

The Secretary of the Association (Dr. A. H. Tonkin) then asked the President to present Dr. J. P. Collins (the Past President) with a minature of the President's badge of office. This was done *amid acclamation,* followed by the presentation to Mrs. Lane of the badge of office of the President's Lady.

Dr. Lane then delivered his Presidential Address, prefacing it with the remark that he was conscious of the importance of the occasion and the high honour bestowed on himself by his election as President of the Association.

His address was received *with acclamation,* after which he declared the meeting closed at 8.45 p.m.

A reception followed, at which refreshments were served.

PASSING EVENTS : IN DIE VERBYGAAN

Union Department of Public Health Bulletin. Report for the 7 days ended 4 November 1954:

Plague, Smallpox: Nil.

Typhus Fever. Cape Province: One (1) further Native case has occurred in the Enyanisweni location in the Qumbu district since the notification of 28 October, 1954.

One (1) further Coloured case has occurred in the Queenstown municipal area since the notification of 28 October, 1954. Diagnosis based on clinical grounds only.

Epidemic Diseases in Other Countries:

Plague: Nil.

Cholera in Chalna (Pakistan); Calcutta (India).

Smallpox in Karachi (Pakistan); Kanpur (India); Phnom-Penh (Cambodia).

Typhus Fever: Nil.

Dr. L. Vogelpoel, M.B., CH.B. (Cape Town), M.R.C.P. (Lond.), formerly registrar at the National Heart Hospital, London, and full-time assistant in the Department of Medicine, Groote Schuur Hospital, Cape Town, has commenced practice as a Specialist Physician at 406 Southern Life Buildings, St. George's Street, Cape Town. Telephones: Residence, 69-1919; Rooms 3-6405.

* * *

Erratum. In the article on 'The Bovine Tubercule Bacillus in Human Tuberculosis' by Dr. George Buchanan published in the *Journal* on 6 November the passage dealing with the 'preparation of specimens' should have read: 'Specimens of pus were inoculated direct into cultures and guinea pigs and the sediments into separate cultures and animals. In another passage the name should have been spelt 'Youmans'.

RESEARCH FORUM, CAPE TOWN

DIETARY ASPECTS OF EXPERIMENTAL ATHEROSCLEROSIS AND THE EFFECTS OF ELEVATION OF BLOOD PRESSURE

Following is an abstract of a paper on the above-mentioned subject presented by Dr. B. Bronte-Stewart at a meeting of the Research Forum, Cape Town, held at Groote Schuur Hospital on 3 November 1954:

The increased consumption of fat and the emotional stresses and strains of our present-day mode of life have both been blamed for the increasing death rate from atheroma in general and coronary atheroma in particular. It is a death rate that is highest in the professional and more highly-skilled occupational classes.[1] In the more civilized countries, and this applies to the European in Cape Town,[2] the death rate from cardiac diseases is twice and thrice that from cancer and more than 10 times that from tuberculosis. Despite this, there is little or no propaganda here to combat this scourge, one that strikes down men at the peak of their careers, with a wealth of wisdom and experience.

In both man and the susceptible experimental animal there is still controversy as to whether the most culpable fat source is animal, vegetable or both. All are agreed that without cholesterol it is not possible to produce atherosclerosis experimentally. Some however, maintain that vegetable oils in addition are necessary for this effect. The position is made more complex with the recent evidence that closely-related plant-sterols inhibit cholesterol absorption. For these reasons an experiment was designed on rabbits where only pure crystalline cholesterol was used as a supplement to the basic diet that the control animals received.[3] In all but two of the cholesterol-fed rabbits the plasma-cholesterol became elevated, arcus senilis developed, xanthomata appeared in the ears, a slight but significant rise in blood pressure occurred, and after a 72-day period extensive aortic atheroma was found. Despite equivalent schedules of cholesterol dosage this period was considerably shorter than in experiments by others where additional oil supplements or cholesterol-containing foods were used as the atherogenic stimulus. The two rabbits who failed to develop atherosclerosis were different only in that their daily consumption of the basis diet (not the cholesterol supplement) was more than twice that of the others. The importance of the percentage fat calories is a concept currently held in man.

In half of the animals the blood pressure had been elevated by constriction of the artery, with the following effects: In the absence of cholesterol feeding no atherosclerosis developed. In the cholesterol-fed animals the mean percentage of aorta involved by atheroma was more than 4 times that of the control animals. This effect on the aorta was as severe in rabbits with a small rise in pressure as in those with very high systemic arterial pressures. The extent of the aortic atheroma was not related to the duration of this increased pressure but was closely related to the variability or lability of the pressure at the outset. This latter relationship was even more apparent in the control cholesterol-fed rabbits exhibiting blood pressures within the normal range. It is possible that such a mechanism may explain the observation that extensive atheroma occurs in man where only blood pressures within the normal range have been recorded.

REFERENCES

1. The Registrar General's Decennial Supplement, England and Wales (1951), Occupational Mortality, Part 1, p. 13. H.M. Stationery Office, London. 1954.
2. Annual Report of the Medical Officer of Health for 1951-52, p. 14. The Corporation of the City of Cape Town.
3. Bronte-Stewart, B. and Heptinstall, R. H. (1954): J. Path. Bact., in the press.

There will be no meeting of Research Forum in December or January.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

Seconesin is a new preparation recently introduced by The Crookes Laboratories Ltd., of London.

Composition. Each tablet contains Mephenesin (3-(2-methylphenoxy) propane-1; 2-diol), 400 mg.; Secobarbital (quinalbarbitone), 30 mg.

Indications—primarily intended for the management of anxiety-tension states, but is suitable for use whenever relaxation and sedation are desired, particularly for day-time sedation.

Action—Secobarbital is a short-acting barbiturate. Its hypnotic action is more powerful than that of barbital and it thus can be used in smaller doses. Mephenesin is a muscle relaxant used in the management of spastic and hypertonic conditions. Both mephenesin and secobarbital are rapidly eliminated from the body and have few, if any, side-effects in the dosage recommended for Seconesin. The preparation should be used with caution in the presence of impared liver function.

Dosage—1 tablet every 4–6 hours, preferably after meals, will give adequate day-time relaxation. 1–2 tablets may be raken on retiring at night.

Packings—bottles of 25 and 100 tablets.

'Largactil' Syrup. Maybaker (S.A.) (Pty.) Limited announce a new presentation of 'Largactil' brand Chlorpromazine Hydrochloride. In addition to tablets and solution 'Largactil' is now available as a syrup in 4 and 40 fluid oz. bottles, containing 25 mgm. in each fluid.

SOUTH AFRICAN MEDICAL AND DENTAL COUNCIL

The following rules for medical practitioners concerning professional appointments are contained in No. 19 of the list of acts or omissions which constitute conduct of which the Council may take cognizance under Chapter IV of the Medical, Dental and Pharmacy Act No. 13 of 1928:

Acceptance by a medical practitioner of any professional appointment (except appointments under the Public Service Act and except certain University and similar appointment) unless

(*a*) a notice inviting applications for such appointments shall have been advertised in the public press and in a South African Medical Journal;

(*b*) Details of the proposed contract are made available to *bona fide* enquirers and to the Council on request;

(*c*) the contract of appointment is in writing and sets out clearly the services which the medical practitioner agrees to render and the fees or remuneration which will be payable by the party appointing him, to him for such services;

(*d*) the contract provides that the medical practitioner shall receive fees or remuneration for the services which he renders only from the party with whom he has contracted, and that that party undertakes liability therefor;

(*e*) the fees or remuneration provided for in the said contract are on a basis which is not derogatory to the medical profession or inimical to the interests of the public;

(*f*) the contract is such that it does not or is not calculated to serve as a means of advertising the name or practice of an individual medical practitioner or partnership of medical practitioners.

CORRESPONDENCE : BRIEWERUBRIEK

TEETHING PATTERNS IN INFANCY

To the Editor: I assumed, at the time, that belief in a dentitional sydrome as a clinical entity had been considerably setback by the publication of your Editorial on 'Teething Powders', as also by the press publicity accorded to the editorial. I took it for granted rightly or wrongly, that the *coup de grace* had been given to the whole teething 'shibboleth' by the exposure of the role played by teething powders in the causation of Pink Disease[1]. It came as a shock, therefore, to see a ghost appear in your columns in the shape of an essay on 'Teething Patterns in Infancy'.[2] The true pattern of events is very different for me from that depicted by the author, and I can see no reason to keep alive an old wives' tale in the face of logical manifestations which are well known, albeit better understood in more serious disease.

Inflammatory lesions are so commonly encountered in the age-group 6 months to 5 years that more attention ought to be given to the related infective processes than to the co-incidental phenomenon of teething, which is not likely to be other than entirely physiological, previous attempts to flaw Mother Nature not having been crowned with encouraging success. Each infant should be thought of as a virgin soil exposed to repeated visits from various representatives of the microbic kingdom. Infants in possession of adequate resistance shake off invasions with comparative ease. They are in the majority and in them teething is painless and symptomless.

The baby is from birth covered by umbrella-immunity derived from maternal sources. From the 3rd month the antibody-titre begins to fade and the system becomes increasingly vulnerable to the infections. The child is taken out of his swaddling clothes, brought out of the nursery and exposed more to the elements. His diet is changed, with a corresponding alteration in the intestinal flora. His utensils are no longer subjected to scrupulous sterilization. Can we afford to doubt that the main concern of the system is with the combat of infective disease and the gearing of the resistance-mechanism to the demands made on it?

The symptoms ascribed to teething (pyrexia, irritability, anorexia) are all hall-marks of infective illness in any age-group. Salivation, watery eyes, runny nose and swollen gums can adequately be accounted for on the basis of an allergic response to an infective antigen. We are indebted to another contributor [3] for a fascinating description of the related histamine bio-chemistry, although his erudition was used, unfortunately, in support of the opposition cause. I find myself unwilling to consider seriously his suggestion that erupting teeth may release histamine.

It is likewise difficult to accept the theory that ectodermal stimulation may be causally related to otitis media, skin rashes etc.,[2] or that variations in thickness of the sub-epithelial tissues of the gums can be brought about by varying degrees of pressure [2] (we are not told what causes the pressure).

Sick infants fall into two groups: (*a*) those who are plainly sick and in whom the morbid findings are obvious (e.g. pneumonia), and (*b*) those who are merely off-colour, in whom the local lesion is difficult and sometimes even impossible to pin-point, but in whom its presence may be presumed. It is in the latter group that teething falls suspect. Even if the tooth erupts days or weeks later it becomes the scapegoat.

The brunt of these infections falls on the naso-pharynx and upper respiratory tract. Clinical observation over an extensive period at the Vasco Infant Welfare Clinic has taught us that, in babies presented as 'teething' ('*Hy ly aan sy tande*'), when obvious illnesses (undernourishment, infective enteritis, bronchitis and broncho-pneumonia, stomatitis, otitis media and infective influenzas) are not found, it is the general rule to find a mild follicular tonsillitis (mild because of residual maternal antibody) or at least a suspicious-looking red and congested pharynx. When the toxic focus evades us it is deemed expedient to presume its presence somewhere and await developments. If the illness does not clear up spontaneously and the infant continues ailing for longer than 2 or 3 weeks it is referred to the Anti-Tuberculosis Clinic for Mantoux-testing. It may take some time before clinical signs become discoverable.

Some of the local lesions seen are suggestive of allergic or anaphylactic reactions and the observation that subsequent attacks of tonsillitis, bronchitis, and broncho-pneumonia tend to show more marked focal and general disturbance suggests that such a mechanism may be operative. Infective asthma is too well-known to us all to need enlarging upon.

Factors predisposing to infection are observed to fall under the headings of

(*a*) hereditary and constitutional factors,
(*b*) congenital influences, e.g. prematurity,
(*c*) undernourishment and mal-feeding,
(*d*) allergic diathesis. The robust child takes all this (and teething too) in his stride. The weaker child makes rougher going of it.

Protection is usually adequately established by 2½ years. Infective attacks cease or abate. I see no connection, however, between this and the completion of the 2-year-old dentition because, even in those infants in whom a case for some kind of teething pattern could be claimed to exist, bouts sometimes continue till the age of 5 years. By this age the defence is pretty solid; e.g. (1) children between 5 and 15 years seldom develop pulmonary tuberculosis, (2) the tonsils often shrink in size (if not removed).

It cannot be denied that it is often good politics to make a diagnosis of 'teething'. It soothes maternal agitation like a balm. An open diagnosis as of 'pyrexia of unknown origin' would in many circumstances be unnecessarily cruel. That does not, however, justify unsupported speculation by the profession. It should not prove impossible to have some of these infants, with suitable controls, kept under germ-free conditions during teething periods. This would soon show which symptoms, if any, can be attributed to teething alone.

'The wise may preach and Satyrists rail . . . .
Custom and nature will prevail.'
*Sedley.**

This letter, I trust, brings out, by implication, the harm that may be done by the premature and often indiscriminate administration of antibiotics.

It is with the kind consent of the Medical Officer of Health of the Divisional Council of the Cape that I have used the name of the Vasco Clinic to support my argument.

M. P. Friedman

156 Voortrekker Road
Goodwood
Cape Province
4 November 1954

1. Janssen, E. (1954): S. Afr. Med. J., **37**, 781 (11 October).
2. James, T. (1954): *Ibid.*, **28**, 890 (16 October).
3. Glass, M. (1954): *Ibid.*, **44**, 940 (30 October).

* Sir Charles Sedley, 1638–1701. *The Doctor and his Patients.*

OXYGEN AND POLIOMYELITIS

To the Editor: Having regard to the recent experiments which were carried out at Oxford University on Roger Bannister to gauge the effect on his staying power of adding extra oxygen to the inhaled air, I feel I must put in a plea for a further trial to be given to the oxygen treatment of poliomyelitis in its earliest invasive stages, in order to reduce the risk of irreversible nerve lesions.

During the 1944 epidemic the Medical Officer of Health of Johannesburg—the late Dr. Laing—was so impressed with the result of this treatment that he had oxygen given as a routine to all cases or suspected cases of polio that were admitted to the Infectious Disease Hospital, Johannesburg. Following this report from Johannesburg, the City Fever Hospital in Durban went to the expense of laying oxygen on to all the polio beds. At this stage certain physicians took the view that one could not get more oxygen into the blood stream merely by breathing a richer air-concentration of the gas, and the very small incidence of residual nerve lesions among the Johannesburg cases was explained as merely an incidental characteristic of a particular virus type.

Perhaps here it might be well to say that workers in the U.S.A. consider that it is an anoxaemia of the motor horn cells which cause their destruction, and I believe this is the view generally held in England. This anoxaemia is brought about by inflammatory cell cuffing of the arterioles adjacent to their entry into the horn cells. This cuffing leads to local oedema, with consequent pressure. It is therefore not difficult to see how the blood supply to one of these motor nerve-cells or neurons becomes diminished.

But the virus attack is fortunately short-lived—not more than 5-6 days, according to the estimate of international research workers. Whether after this onslaught the destructive changes in the neurons are irreversible or not, will depend on whether the oxygen supply has been seriously diminished or cut off for a sufficient period. It stands to reason therefore that any extra oxygen that can be put through to the cell might make all the difference between reversibility and irreversibility.

It is at least quite possible that the results of the employment of oxygen in the Johannesburg cases was something more than a coincidence.

There are many admirable appliances, tents, etc. available today, for oxygen therapy of this kind, but the treatment must be used as early as possible in the febrile stage, i.e. when the motor neurons are being subjected to anoxaemia.

B. F. Sampson

23 Medical Centre
Durban
6 November 1954

GIFTS TO MISSION HOSPITALS

To the Editor: May I through your *Journal* express the gratitude of our Fellowship and of a number of missionary doctors for the response received to our recent appeal for support by means of second-hand equipment, journals, or money. A fair amount of equipment was received and 14 packages have already been sent to various mission hospitals; some equipment is still being disposed of. We are also grateful to those who have given journals, particularly those who have offered to pass them on regularly.

As mission hospitals are always in need of support, this gesture from other doctors will always be appreciated.

R. P. Hewitson
Hon. Secretary
Medical Christian Fellowship of South Africa

14 Woodside Drive
Pinelands
C. P.
8 November 1954

STERILIZATION AND CONTRACEPTION

To the Editor: Disavowing any intention of writing anything hurtful or unjustified in a controversy which has divided our colleagues for some time, I venture to express the views of a Catholic doctor, as far as can be done in a short letter.

Love, as expressed in coitus, is one of the greatest sources of happiness in the world. It is only realized in the selfless, personal union of two individuals. Any interference with its spontaneity destroys the perfection of its communion—when fear and calculation come to the minds of the couple, they are already seeking a substitute. Love takes no heed of the consequences, whether (seemingly) unprovided-for children or death. The substitutes are abstinence (partial or complete) from coitus, masturbation (private or mutual, which is contraception) and mutilation.

I am one of those who deplore that our medical training is not associated with a scholastic training to clarify our minds in logic and definition.

In days when the profession spends so much energy in urging the public to abstain from food, drink, luxuries and various ambitions, I cannot take seriously any plea that abstinence does anybody any harm. After all, one should not generalize from sexual neurosis.

The physical and psychical effects of masturbation can be found in many books; the difficulty is definition. My definition includes pre-marital indulgence among methods of masturbation. Where pleasure is sought selfishly there can be no love.

In strict definition, any operation involves a mutilation. What justifies it is the urgent necessity for doing good to the afflicted. Although scientific correlation of experience has laid down various criteria which virtually determine the surgeon's decision, yet every operation ramains a separate and personal decision for the surgeon, who accepts the heavy responsibility of his action.

As far as I am aware, no advocate of sexual mutilation has gone the length of proposing a general law for the sterilization of whole classes; but logically there is no reason why he should not do so, once he loses touch with the brotherhood of man and the fatherhood of God in dealing with the problems of human survival.

Once the medical profession sees the common man as subservient to his environment and material things, it has committed suicide by denying the ultimate reason for the doctor's existence as protector of the afflicted. Rather than submit to individual degradation and pollution, it were better for mankind to return to the jungle laws of survival, or become the slaves of oligarchy.

This sketchy definition of the traditional position will serve to explain why an increasing number of us are alarmed at the ready acceptance of subversive doctrines by those who have the responsibility of educating our students.

Kevin Doherty

Rosebridge
Main Road
Rosebank, C.P.
7 November 1954

THE RESULT OF THE POLL

To the Editor: I join Dr. Whitaker and others [1] in expressing surprise at the curiously muddled editorial comment on 'The Result of the Poll'.[2]

Where is the justification for the statement that 'there is a majority *opposed* to the continuance of a specialist register (1,249 so voting . . .)'? In plain fact these 1,249 voted for a 'register of consultants only', that is *for* a 'register of specialists', who practise only in consultant capacity.

The majority vote clearly indicates that the term 'specialist' should be abandoned and that all specialists should be consultants.

Statutory regulation of this would remove so many obstacles to the proper practice of medicine in South Africa. It should be unethical for a consultant to accept a patient without the knowledge, consent and collaboration of his G.P. and it should be unethical for a G.P. to deny to his patient consultant opinion and collaboration. Breaches of this ethical rule should not escape cognizance by patients, colleagues or Medical Council.

Basil Goldschmidt

St. Ann's General Hospital
St. Ann's Road,
South Tottenham, N. 15
England
3 November 1954

1. Whitaker, A. M. *et al.* (1954): S. Afr. Med. J., **28,** 904 (16 October).
2. Editorial (1954): *Ibid.*, **28,** 800 (18 September).

METHOD OF EXECRETORY UROGRAPHY

To the Editor: I wish Dr. Dennehy [1] well and trust that his paper describing a method of execretory urography in children has a wide attraction for those concerned with this kind of examination.

Miss Betty Ingle and I [2] also tried in 1952 to make more widely known that which we dubbed the Matthei-Christiansen manoeuvre, but it is slow in catching on. I do not believe the manipulation of the stomach, as described by Dr. Dennehy, is really necessary to show up the right kidney dye-shadows. It is not only the occasional case that shows both kidney shadows simultaneously without manual displacement, so well demonstrated in Dr. Dennehy's fourth figure where the result obtained is due solely to the greater gaseous distension of the stomach.

This was allowed for by Christiansen [3] who gave usually 30-50 ml. of apollinaris but suggested increasing this amount if the first quantity did not distend the stomach enough.

Any gaseous discomfort or eructation can be avoided by giving the child's usual milk formula only *ad* 8 fluid ounces just before urography. This gives as good X-ray studies as Christiansen's, accidently discovered by Matthei.[4] Dr. Dennehy mentions that he tried various methods to increase the gastric distension but does not particularize and leaves me wondering whether Matthei's observation has come to his notice.

Theodore James

16 Spring Gardens
Pinelands
Cape
7 November 1954

1. Dennehy, P. J. (1954): S. Afr. Med. J., **28,** 949 (6 November).
2. James, Th. and Ingle, B. (1952): Radiography, **18,** 164.
3. Christiansen, H. (1945): Acta radiol., **26,** 46.
4. Matthei, L. P. (1950): J. Urol., **64,** 417.

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SCHERING

Provincial Administration of the Cape of Good Hope

UNIVERSITY OF CAPE TOWN : JOINT MEDICAL STAFF FOR GROOTE SCHUUR AND OTHER TEACHING HOSPITALS

VACANCY

1. Applications are invited from registered Medical Practitioners (registered Specialists) for appointment to the:

DEPARTMENT OF MEDICINE

Medical Practitioner, Grade E—sessions—salary £146 per annum per session.

2. The conditions of service are prescribed in terms of Hospital Board Service Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

3. The Joint Medical Staff is required to serve jointly the Provincial Administration of the Cape of Good Hope and the University of Cape Town.

4. Candidates must have not less than three years' experience after registration as a Specialist in the speciality in which the vacancy exists.

5. A session shall be four hours per week, not necessarily continuous clinical and/or teaching work.

6. Application must be made on the prescribed form (Staff 23), which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any provincial hospital or Secretary of any School Board in the Cape Province.

7. The completed application forms must be addressed to the Director of Hospital Services, P.O. Box 2060, Cape Town, and must reach him not later than 11 December 1954. Candidates must state the earliest date on which they can assume duty.

8. Candidates must state the maximum number of sessions which they would on appointment be prepared to undertake, preference for days and times should be stated.

M129321

The Medical Association of South Africa
Die Mediese Vereniging van Suid-Afrika

AGENCY DEPARTMENT : AGENTSKAP-AFDELING

JOHANNESBURG

Medical House, 5 Esselen Street. Telephones: 44-9134, 44-0817
Mediese Huis, Esselenstraat 5. Telefone: 44-9134, 44-0817
Tel. Add.: 'Serpent'

ASSISTANTS/LOCUMS REQUIRED
ASSISTENTE/PLAASVERVANGERS BENODIG

(708) Southern Rhodesia. A locum is required for a large general practice, as from second week in April 1955, for one month. Preferably man who would consider staying on as an assistant with view to partnership. Salary £100 p.m. plus all found. A car is not essential.

(706) Wes-Transvaal. 'n Assistent is benodig vanaf 2 Januarie 1955. Salaris £100 p.m. plus vry petrol en olie en diens van kar plus £10 p.m. kartoelae.

(705) An assistant is required for a large partnership practice in the Free State. Excellent terms to be arranged. 120 miles from Johannesburg.

(704) Near Johannesburg. A locum is required for 3 months, as from 1 December or later. Large partnership practice. £3 3s. 0d. per day, plus all found, plus a car allowance.

(699) Locum is required as from 12 December for 1 month. Will suit a newly qualified man. £3 3s. 0d. per day, plus all found. Twelve miles from Johannesburg.

(692) Large hospital town, within easy reach of Johannesburg. Locum as from 12 December for 1 month. Partnership practice. £3 3s. 0d. per day plus all found and a car allowance.

(690) Groot Transvaalse dorp. Plaasvervanger vanaf 18 Desember tot 18 Januarie. £3 3s. 0d. per dag, plus alles vry. Aangename pos.

(689) Transvaal—vennootskap praktyk—100 myl vanaf Pretoria Plaasvervanger vir Desember en Januarie in hierdie vennootskap praktyk, en volgens keuse een maand op dorpie 18 myl daarvandaan. Salaris £90 p.m. vry losies, petrol en olie en £5 per 1,000 kartoelae.

(666) Vrystaat. Plaasvervanger vir een maand vanaf 15 Desember. Terme, £3 3s. 0d. per dag, vry losies, petrol en olie en 'n kartoelaag van £10 per 1,000 myl.

(652) Large hospital town close to Johannesburg. A Locum is required as from 10 December for one month. Salary £3 3s. 0d. per day, plus all found and a car allowance. Native practice. Practically no night work.

(627) O.F.S. Locum required as from 10 December for one month. Salary £3 per day, plus all found. Car could be provided.

(640) O.F.S. Goldfields. Locum is required for December and January. £3 3s. 0d. per day, plus free board and lodging, petrol and oil. Partnership practice.

(688) Reef hospital town. Locum for one month as from 13 December. Salary £3 3s. 0d. per day plus all found. A car could be provided. Partnership practice.

PART-TIME WORK REQUIRED

Johannesburg. Part-time work or assistantship required, by an experienced doctor. Mornings only.

* * *

KAAPSTAD : CAPE TOWN

Posbus 643, Telefoon 2-6177 : P.O. Box 643, Telephone 2-6177
Waalstraat 35 : 35, Wale Street

PRAKTYKE TE KOOP : PRACTICES FOR SALE

(1276) S.W.A. hospital town. Well-established prescribing practice. Cash income=£3,879 p.a. THIS IS AN EXCELLENT OPPORTUNITY to acquire a very good practice with full scope for surgery at an exceptionally low premium as the owner wishes to sell as soon as possible in order to specialize. Premium for goodwill, instruments and excellent surgery furniture £1,600. Terms possible.

(1790) Transkei practice. Two appointments. Receipts for year 1953/54 £4,220. Premium of £2,000, includes drugs, surgery furniture, instruments, etc. Payment could be made in instalments. A well built house available.

(1765) Noord-Kaapland. Praktyk sonder opposisie. Verpleeginrigting plaaslik. Distriks- en Spoorweggeneesheer. Premie vir klandisiewaarde, meubels, medisyne en instrumente ongeveer £800–£900. Betaling in paaiemente aanvaarbaar.

(1809) Nucleus of dispensing practice, predominantly native, in pleasant EASTERN PROVINCE village about 30 miles from coast and 3½ hours from Durban. Mission hospital being built. Excellent interpreter available. Definite scope for expansion. Cash takings for 4 months, since practice started, £458. House to rent at £7 5s. p.m. Electric power supplied by local board. No night or weekend calls. Seller wishes to leave for good personal reasons and is offering the drugs, instruments, surgery furniture for sale at ±£160. Nominal price for goodwill ±£40. New householdfurniture can be taken over if desired. TERMS CAN BE ARRANGED.

ASSISTENTE: PLAASVERVANGERS VERLANG
ASSISTANTS: LOCUMS REQUIRED

LOCUMS AND OR ASSISTANTS ARE URGENTLY REQUIRED FOR URBAN AND RURAL AREAS. DETAILS ON APPLICATION.

INSTRUMENTS FOR SALE

(1587) ***Zeiss Winkel Microscope*** **(91385) with 3 lenses. Oil immersion and 2 eyepieces £60. Haemacytometer £3.16.0.**

These instruments are NEW but available at reduced prices.

(1681) Urological instruments at greatly reduced prices.

(1810) Orthopaedic and general instruments, stainless steel. Excellent condition. Reduced prices.

(1655) Two couches and 2 sterilizers.

* * *

DURBAN

112 Medical Centre, Field Street. Telephone 2–4049

PRACTICES FOR SALE

(PD28) Durban. General practice, also non-European surgery. Owing to ill-health owner wishes to sell as soon as possible. Premium £1,750. House for sale £8,000.

(PD30) Durban. Old-established good class, mainly European practice. Premium £3,000. Owner intends specializing.

(PD31) Natal Inland. Unopposed prescribing practice, mainly Native. Monthly cash receipts average £450. Premium required £2,500 includes surgery, furniture and instruments. House for sale. All sporting facilities.

(PD32) Northern Natal. Well established general mixed practice of 20 years standing. M.O.H. and D.S. appointments. All hospital facilities. Premium £1,500 including surgery furniture and drugs. House £12 per month. For immediate sale.

Physician Specialist unopposed Practice for immediate sale. Inland City Premium £2,500 includes £1,000 equipment.

LOCUMS REQUIRED

(SV5) Locum for January. £3 3s. per day plus board and lodging. £10 car allowance and petrol. Natal Hospital town. Travelling allowance to and from practice for reasonable distance.

(LD6) Natal. From 8 to 23 January 1955. Mainly non-European dispensing with mine Hospital appointment. Own car necessary. £3 3s. per day, all found.

ASSISTANT REQUIRED

(NC5) Assistant required in general practice, country practice. 75% non-European. No surgery or midwifery undertaken. Very little night work. Commence December 1954. Salary £1,200 p.a. ¾-hour drive from Durban.

TO ADVERTISERS

Johannesburg doctor with some literary ability would like to do part-time publicity copy writing for wholesale drug house. Write A.W.T., P.O. Box 643, Cape Town.

PRAKTYK TE KOOP

Eenmans-praktyk. Blankes en 'n baie groot kontant naturelle-praktyk. Nie-oordraagbare aanstellings omtrent £140 per maand. Hospitaal in aanbou. Baie min nagwerk. Premie £1,500 sluit in meubels instrumente en medisyne voorraad. Terme kan gereël word. Omset £4,000 per jaar. Doen aansoek A.X.A., Posbus 643, Kaapstad.

Natalse Provinsiale Administrasie

VAKATURES : ADJUNK-ASSISTENTGENEESHERE TE ADDINGTONHOSPITAAL

Aansoeke om aanstelling in die betrekkings van Adjunk-assistentgeneesheer (Medisyne), Adjunk-assistentgeneesheer (Narkotisering) en Adjunk-assistentgeneesheer (Vrouesiektes en Verloskunde) word van geregistreerde mediese praktisyns ingewag.

Salaris is volgens die skaal £720—840 × 60—1,020.

Duurtetoeslag teen onderstaande tariewe is ook betaalbaar:

Getroudes (mans), £320 p.j.

Ongetroudes (mans of vroue), £100 p.j.

Aansoeke om die betrekking moet gemaak word op die voorgeskrewe vorm Z. 83, wat verkrygbaar is by enige Provinsiale of Goewermentskantoor, en moet tesame met volle besonderhede van vorige ondervinding, gerig word aan die Direkteur van Provinsiale Mediese en Gesondheidsdienste, Posbus 20, Pietermaritzburg, om hom voor of op 31 Desember 1954, te bereik.

AD8436

Natal Provincial Administration

VACANCIES : REGISTRARS AT ADDINGTON HOSPITAL

Applications are invited from Registered Medical Practitioners, for appointment to the posts of Registrar (Medicine), Registrar (Anaesthetics) and Registrar (Gynaecology and Obstetrics).

Salary is on the scale £720—840 × 60—1,020.

Cost of Living Allowance is also payable at the following rates:

Married (Male), £320 per annum.

Single (Male or Female), £100 per annum.

Applications for the post must be made on Form Z. 83 which is obtainable from any Provincial or Government Office, and must be forwarded with full particulars of previous experience, to the Director of Provincial Medical and Health Services, P.O. Box 20, Pietermaritzburg, to reach him by 31 December 1954.

AD8436

Dorpsraad van Tzaneen

VAKATURE : DEELTYDSE MEDIESE GESONDHEIDSBEAMPTE

Aansoeke word hiermee ingewag van gekwalifiseerde Mediese Praktisyns vir aanstelling tot die pos van Deeltydse Mediese Gesondheidsbeampte teen 'n salaris van £15 per maand.

Die aanstelling is onderhewig aan die goedkeuring van die Departement van Gesondheid en onderworpe aan die ondertekening van 'n ooreenkoms.

Aansoeke wat melding maak van ouderdom, kwalifikasies, ondervinding ens. moet die ondergetekende bereik nie later as Vrydag 31 Desember 1954 nie.

Stemwerwing is verbode en bewys daarvan sal 'n applikant diskwalifiseer.

J. J. Botha
Stadsklerk

Munisipale Kantore
Tzaneen
15 Oktober 1954

Tzaneen Village Council

VACANCY : PART-TIME MEDICAL OFFICER OF HEALTH

Applications are hereby invited from qualified Medical Practitioners for appointment to the post of Part-Time Medical Officer of Health at a salary of £15 per month.

The appointment is subject to the approval of the Department of Health and the completion of a contract of service.

Applications stating age, qualifications, experience etc. must reach the undersigned not later than Friday 31 December 1954.

Canvassing is prohibited and proof thereof will disqualify an applicant.

J. J. Botha
Town Clerk

Municipal Offices
Tzaneen
15 October 1954

City of Cape Town

VACANCIES FOR HOUSE PHYSICIANS AND INTERNS

Applications are invited from medical practitioners for the positions of House Physicians and Interns at the City Infectious Diseases Hospital, Brooklyn Hospital for Chest Diseases and Langa Native Hospital. Appointments to the latter two hospitals are recognized by the South African Medical Council as compulsory 'Internship' in terms of the Medical, Dental and Pharmacy Act.

Appointments will endure for a period of six months commencing on 16 January 1955, and the salary will be at the rate of £360 per annum for House Physicians and £240 per annum for Interns, both plus board/residence etc., in respect of the positions at the City Hospital and the Brooklyn Hospital for Chest Diseases. In addition to the above salary a temporary Cost-of-Living Allowance at the statutory rate will be paid.

Applications endorsed 'Medical Appointments', stating age, qualifications, house appointments already held, if any, and other experience, accompanied by copies of not more than three recent testimonials, and addressed to the Medical Officer of Health, 12 Keerom Street, Cape Town, will be received up to noon on 6 December 1954.

M. B. Williams
Town Clerk

City Hall,
Cape Town
20 November 1954

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Provincial Administration of the Cape of Good Hope

(HOSPITALS DEPARTMENT)

VACANCY : HONORARY MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for appointment to the post of Senior Thoracic Surgeon at the Provincial Hospital, Port Elizabeth.

The appointment, conditions of service and remuneration attached to the abovementioned post shall be subject to the provisions of the regulations promulgated under Provincial Notice No. 533 of 1953.

Applications must be made on the prescribed form (Staff 23) which is obtainable from the undersigned to whom completed forms must be addressed to reach his office not later than 20 November 1954.

J. H. McLean
Medical Superintendent

Provincial Hospital
Port Elizabeth
1 November 1954

14587

University of the Witwatersrand Johannesburg

MEDICAL SCHOOL

The undermentioned diploma courses in the Faculty of Medicine may be offered in 1955:

Postgraduate Diplomas

Diploma in Medicine.
Diploma in Surgery.
Diploma in Obstetrics and Gynaecology.
Diploma in Public Health.
Diploma in Tropical Medicine and Hygiene.

Nursing Diploma

Diploma in Nursing.

The closing dates for the receipt of applications for admission are:

Postgraduate diplomas—3 December 1954.
Diploma in Nursing—31 December 1954.

All applications should be lodged with and further information is obtainable from, the Assistant Registrar, Medical School, Hospital Hill.

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Provincial Administration of the Cape of Good Hope

HOSPITALS DEPARTMENT

HOSPITAL BOARD SERVICES : VACANCY

Applications are invited from Registered Medical Practitioners for appointment to the following vacant post:

Division	*Post*	*Hospital*	*Emoluments*	*Closing Date*
Professional and Technical	Medical Practitioner, (Part-time)	Bellville Free Dispensary	£1 1s. 0d. per two (2) hour session on three mornings per week 9 a.m. to 11 a.m.	4.12.54

Applications to be addressed to the Medical Superintendent, Cape Town Free Dispensary, Buitenkant Street, Cape Town.

The conditions of service are prescribed in terms of Hospital Board Service Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

Application must be made on the prescribed form (Staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province.

Candidates must state the earliest date on which they can assume duty.

M129322

Windhoek Hospital Board

VACANCY PHYSIOTHERAPIST

Applications are hereby invited from suitably qualified persons for the position of Physiotherapist at the Windhoek Hospital.

Applicants must be registered Physiotherapists.

Salary Scale, £450 × 30—690 per annum.

Cost of Living Allowance, £450 notch, £210 married, £12 Single. £480—690 notch, £234 married only.

Applications to reach the undersigned not later than 15 December 1954.

The Secretary

Windhoek Hospital Board
P.O. Box 274
Windhoek.

Rhodesia Railways

LOCUM TENENS : LIVINGSTONE

Applications are invited from registered Medical Practitioners, for a Locum Tenens at Livingstone, from 10 December 1954 to approximately end of June 1955. Surgical experience a recommendation.

Salary: An inclusive fee of £3 3s. 0d. per day.

Private Practice: Permitted.

Transport: Applicant must provide his own motor car, but a reasonable monthly supply of petrol is provided and an allowance of 1/- per mile granted when travelling to the Victoria Falls on duty.

Housing: Furnished house available at reasonable rental.

Travelling: Free return Railway fare paid from point of engagement for applicant and his family.

For further information, stating age, nationality, qualifications and enclosing recent testimonials apply to:

The Chief Medical Officer

Rhodesia Railways
P.O. Box 792
Bulawayo, M.D. 91

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SPECIAL NOTICE

SOUTH AFRICAN IRON AND STEEL CORPORATION LIMITED

VACANCIES FOR FULL-TIME MEDICAL OFFICERS IN THE NORTH WESTERN CAPE

Intending applicants for the above-mentioned vacancies which were advertised in the Journal of 13 November 1954 are advised that the closing date for applications has been extended to 30 November 1954.

Westelike Provinsie-Bloedoortappings-Diens

SUID-AFRIKA

GENEESHEER-DIREKTEUR (PATOLOOG)

Aansoeke word ingewag van geneeshere (geregistreer of registreerbaar by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad) om die betrekking van Geneesheer-Direkteur van die Westelike Provinsie-bloedoortappingsdiens teen 'n salaris van £2,500 per jaar (inklusief).

Die pligte aan die pos verbonde behels uitbreiding van die bestaande bloedoortappingsdiens en die oprigting van die nodige laboratoriumdienste.

Applikante moet oor voldoende ondervinding van alle vertakkinge van bloedoortappingswerk beskik veral met betrekking tot laboratoriumwerk.

Die aanstelling sal in die eerste instansie vir 'n proeftydperk van een jaar wees, daarna onder 'n vaste kontrak vir vyf jaar, na welke tydperk die terme van die kontrak hersien sal word. Die Geneesheer-Direkteur sal egter geregtig wees om ter eniger tyd na verstryking van die eerste jaar van die kontrak ses maande kennis van beëindiging van die kontrak te gee.

Aansoeke, vergesel van volle besonderhede, moet by die Sekretaris, Westelike Provinsie-bloedoortappingsdiens, Posbus 3788, Kaapstad ingedien word en hom nie later as 31 Desember 1954 bereik nie.

Western Province Blood Transfusion Service

SOUTH AFRICA

MEDICAL DIRECTOR (PATHOLOGIST)

Applications are invited from Medical Practitioners (registered or registrable with the South African Medical and Dental Councul) for the post of Medical Director to the Western Province Blood Transfusion Service at a salary of £2,500 per annum (inclusive).

The duties attaching to the post will consist of the expansion of the existing Blood Transfusion Service and the establishment of the necessary Laboratory services.

Applicants should have adequate experience in all branches of Blood Transfusion work with special reference to Laboratory work.

The appointment will, in the first instance, be for a trial period of one year, with a definite contract of five years thereafter; the terms of the contract being subject to review after that period. The Medical Director will, however, be entitled to give six months notice of termination of contract at any time after completion of the first year of the contract period.

Applications, together with full particulars, should be submitted to The Secretary, Western Province Blood Transfusion Service, P.O. Box 3788, Cape Town, to reach him not later than 31 December 1954.

ASSISTENT / VENNOOT BENODIG

Algemene praktisyn in groot en baie vooruitstrewende platteland se hospitaaldorp benodig, 'n medewerker wat ook belangstel in Snykunde. Inkomste baie groot. Alleenlik privaat praktyk word onderneem. Tweetalige Engelsprekende Christen ook welkom. Bel Pretoria 78-2928 (verkieslik tussen 6 en 10 n.m.) of skryf na 'Vennoot', Posbus 643, Kaapstad.

IMPORTANT NOTICE

Medical practitioners who intend applying for any appointment specified in this notice for which an advertisement appears in this issue of the Journal are advised to communicate first with the Honorary Secretary of the Branch of the Medical Association of South Africa concerned:

Appointment: **Vanderbijl Park Estate Company: Vacancy full-time Medical Officer.**

Branch: **Southern Transvaal, M.A.S.A., 5 Esselen Street, Johannesburg.**

Vanderbijl Park Estate Company

VACANCY — FULL-TIME MEDICAL OFFICER

Applications are invited from registered General Practitioners for the above position.

The salary grades are as follows:

Grade 1: £900 p.a. × 60 (½ yearly)—£1,200 p.a.
Grade 2: £1,200 p.a. × 100 (Annually)—£2,005 p.a.

The commencing salary will be determined in accordance with qualifications and experience of the successful applicant. Experience in anaesthetics will be an additional recommendation.

In addition to the above, a variable cost-of-living allowance is paid, at present amounting to £25 7s. 6d. per month for married persons and £14 14s. 8d. per month for single persons.

A holiday leave bonus, equivalent to one month's basic salary is also paid in terms of the Company's Leave Regulations. The successful applicant will be required to contribute to the Iscor Pension Fund and will also be required to become a member of the Iscor Recreation and Social Club. A satisfactory certificate of health obtained from the Company's Senior Medical Officer will be required by the Company and the appointment will be subject to the Company's conditions of service.

Applications giving full details of qualifications and experience and earliest date duties can be assumed should reach the undersigned, P.O. Box 1, Vanderbijl Park, not later than Friday, 3rd December, 1954.

Application forms together with full particulars regarding the position, will be forwarded to bona fide applicants on written application to the undersigned.

T. H. E. Lake
Secretary

4th November, 1954
P.O. Box 1
Vanderbijl Park

NEW ZEALAND
COUNTRY PRACTICE FOR SALE

Country practice, Medical, Obstetric and Anaesthetic. Income £2,700 (N.Z.) nett. House (four bedrooms and attached professional accommodation) and practice £3,450 (N.Z.). Please reply A.W.Z., P.O. Box 643, Cape Town.

APPLICATIONS ARE INVITED FROM MEDICAL PRACTITIONERS

Prepared to give part-time service for the purpose of drawing blood from donors, administering blood transfusions and medically examining donors. Full details will be supplied on application—Write: The Medical Officer, Western Province Blood Transfusion Service, P.O. Box 3788, Cape Town.

LOCUM TENENS WANTED

For inland town for January, February and March. Knowledge of surgery a recommendation. Salary according to experience. Must have own car. Apply A.W.Y., P.O. Box 643, Cape Town.

Provincial Administration of the Cape of Good Hope

VICTORIA HOSPITAL, WYNBERG
VACANCY : MEDICAL PRACTITIONER GRADE "A"

(Salary scale £500—£600—£660—£720)

Applications are invited from suitably qualified persons for appointment to the above post.

In addition to the salary scale indicated a temporary cost of living allowance, at rates prescribed from time to time by the Administrator, is payable. The present rate is £110 per annum for single persons and married women whose husbands are not in Government employment, and £352 per annum for married men.

The conditions of service are prescribed in terms of the Hospital Board Service Ordinance No. 19 of 1941, as amended from time to time, and the regulations framed thereunder.

The appointment will be on contract for two years in the first instance and may be renewed twelve months at a time up to a maximum of four years. The appointment may, however, be terminated by three months notice, in writing, on either side.

Applications should be submitted, in duplicate, on the prescribed form (Staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or the Medical Superintendent of any provincial hospital or Secretary of any School Board in the Cape Province.

The completed forms should be addressed to the Medical Superintendent, Wynberg, Orthopaedic and Convalescent Hospitals, P.O. Box 1487, 58 Loop Street, Cape Town, and should be posted to arrive not later than noon on Saturday, 18 December 1954.

Candidates should state the earliest date on which they will be able to assume duty.

M372207

Provinsiale Administrasie van die Kaap die Goeie Hoop

VICTORIA-HOSPITAAL, WYNBERG
VAKATURE : MEDIESE GENEESHEER GRAAD „A"

Aansoeke word ingewag van persone met geskikte kwalifikasies vir aanstelling tot die pos van Mediese Geneesheer Graad ‚A' by bogenoemde inrigting met salaris volgens die skaal £500—£600—£660—£720.

Benewens die salarisskaal soos aangedui is 'n lewekostetoelae betaalbaar aan voltydse beamptes en werknemers teen bedrae wat van tyd tot tyd deur die Administrateur vasgestel word. Die huidige tarief is £110 per jaar vir ongetroude persone of getroude vrouens wie se eggenote nie in die staatsdiens werksaam is nie, en £352 per jaar vir getroude mans.

Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraaddiens nr. 19 van 1941, soos gewysig, en die regulasies daarkragtens opgestel.

Die aanstelling sal, in die eerste opsig, onder kontrak vir twee jaar wees en daarna hernubaar elke twaalf maande tot op 'n maksimum van vier jaar.

Die aanstelling mag daarenteen beëindig word by wyse van drie maande skriftelike kennisgewing aan beide kante.

Aansoek moet gedoen word, in duplo, op die voorgeskrewe vorm (staf 23) wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige provinsiale hospitaal of by die Sekretaris van enige skoolraad in die Kaapprovinsie.

Die voltooide aansoekvorms moet gerig word aan die Mediese Superintendent, Wynberg, Ortopediese en Herstellingshospitaal, Posbus 1487, Loopstraat 58, Kaapstad, om hom nie later as twaalf middag op Saterdag 18 Desember 1954 te bereik nie.

Kandidate moet vroegste datum meld wanneer hulle diens kan aanvaar.

M372207

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